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TABULAR DISPLAYS OF GEOMAGNETIC GEOMETRY

RM 65EMP 3
DASA 1377

GENERAL ELECTRIC COMPANY
SANTA BARBARA
CALIFORNIA

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GENERAL ELECTRIC COMPANY
SANTA BARBARA, CALIFORNIA

ABSTRACT

~~This report contains~~ ^{are given} Tables presenting computational data pertaining to the geometric properties of the geomagnetic field, and a brief related theoretical description to make this material more meaningful. The tables include:

1. The values of total field intensity (B) and McIlwain's magnetic shell parameter (L) for altitudes from zero to two thousand kilometers,
2. The detailed value of total field intensity near the South Atlantic anomaly,
3. The traces in both hemispheres of points with a fixed value of B and L .

The description includes tables of the geomagnetic coefficients used and a description of the codes utilized. [←] The tables have been carefully checked. Because of the magnitude of this task and the wide distribution, notification of any detectable errors which may have been overlooked would be appreciated. The material presented here has been presented in another form in TEMPO report RM 63TMP-2, DASA 1372 "Graphical Displays of Geomagnetic Geometry."

ACKNOWLEDGMENTS

It is difficult in a brief summary to justly acknowledge the help of everyone whose work played a part in molding the ideas that have led to the presentation of the results of this study. To all of those who are not mentioned we apologize, for to all we are equally indebted.

It is a pleasure to express our sincerest appreciation to Lt. Col. Billy McCormac of DASA for his encouragement and stimulating discussions. Similarly it is our pleasure to express our sincere appreciation to Major R. Pennington of DDRE and Dr. C. E. McIlwain of U.C. San Diego for contributing their computer codes, as well as F. H. Sage for the code which locates the geomagnetic equator.

WFD

DCK

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FOREWORD

The material presented in this report has been presented in the form of maps in another TEMPO report (RM 63TMP-2 or DASA 1372 "Graphical Displays of Geomagnetic Geometry" April, 1963). References to this material will be found in the footnotes attached to each of the tables in this report.

Conversely the maps are related to the tables in the following way:

Map	Table	Map	Table	Map	Table
1	1, 2	18	34	35	53
2	3, 4	19	35	36	54
3	5, 6	20	36	37	55
4	7, 8	21	37	38	56
5	9, 10	22	38	39	57 to 63
6	11, 12	23	39	40	64
7	13, 14	24	40	41	57 to 63
8	15, 16	25	41	42	64
9	17, 18	26	42	43	65 to 72
10	19, 20	27	43	44	65 to 72
11	21, 22	28	44	45	57 to 64
12	23, 24	29	45	46	57 to 64
13	25, 26	30	46	47	65 to 72
14	27, 28	31	47	48	65 to 72
15	29, 30	32	48	49	64
16	31, 32	33	49, 50	50	72
17	33	34	51, 52	51	73

DESCRIPTIVE MATERIAL

INTRODUCTION

The earth's magnetic field has been studied since the dawn of modern physics. There are authoritative descriptions of the older work in References 1 and 2. Naturally enough the earlier students were interested only in the field on the surface of the earth—field which affected the compass. This interest led Gauss to devise the method of expansion in spherical harmonics which has dominated descriptions of the geomagnetic field for a century and a half.

More recently, inspired by Birkelund's terrella experiments which so spectacularly simulate auroral displays, geophysicists began to investigate the causes of the aurora and so initiated the study of the behavior of charged particles in space. There is an excellent description of the older work on this problem in Reference 3 and the newer ideas are collected in Reference 4.

Astrophysicists soon recognized the importance of this work to problems of stellar evolution and related astronomical phenomena. The background to modern work in this direction is well summarized in Reference 5. More recently still it has been widely recognized that these effects, originally observed in an astronomic context, could be of great use in practical applications of fusion processes. The literature on plasma physics is already immense and mostly not too relevant to geomagnetic phenomena but some work which originated in plasma physics is of great importance (for example, References 6 and 19).

Finally, the work of Van Allen and his colleagues (see, for example, Reference 7) has clarified the physical picture involved in radiation belt and shell formation and placed the mathematical models of charged particles in space on a firm observational basis.

PHYSICAL BACKGROUND

For an adequate description of the tables in this report there are three separate stages in the development of the subject which must be considered: first, the basic geometry of the earth's geomagnetic field; second, the motion of charged particles in that field; and third, those special properties of the geomagnetic field of particular interest to studies of particle motion. Each of these is discussed separately below.

The Geomagnetic Field

The geomagnetic field unquestionably exists but its fundamental cause has not been satisfactorily explained. Paleomagnetic studies⁹ indicate that it has been present since the beginning of geologic history. In the absence of any fundamental theoretical derivation it has been necessary to determine the geomagnetic field strictly from observational data. This is permissible because good observations exist over a wide range of time and location.

The geomagnetic induction \vec{B} is a vector quantity which is conventionally measured in a variety of ways. \vec{B} is related to the force \vec{F} exerted on a particle of charge e moving with velocity \vec{u} by

$$\vec{F} = e\vec{u} \times \vec{B}.$$

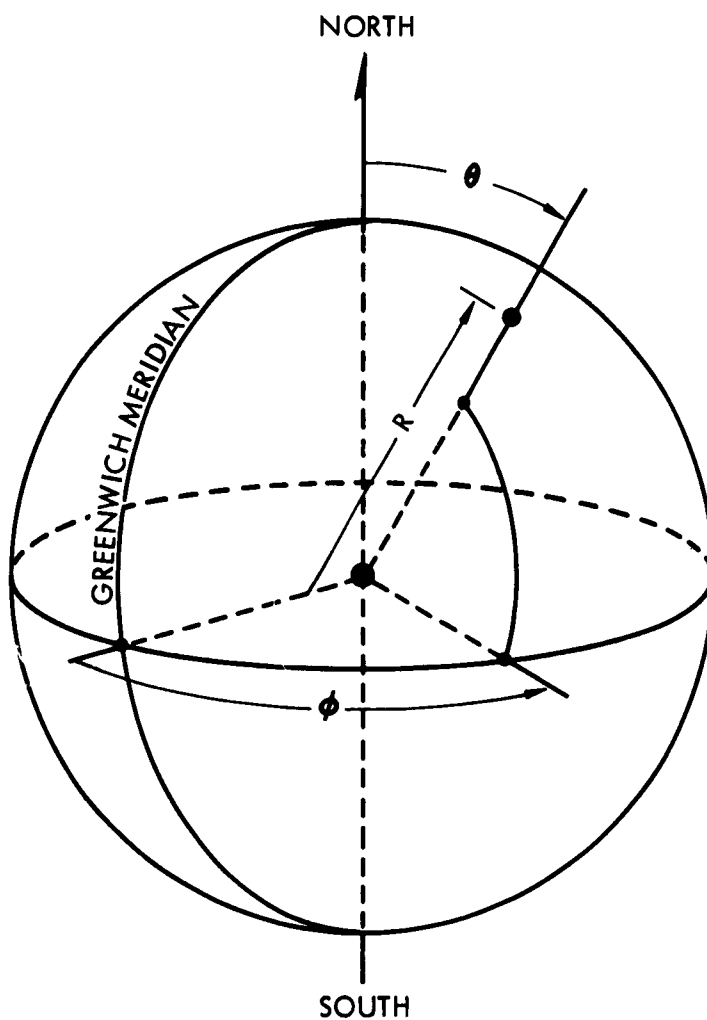
The geomagnetic field \vec{H} is equal to \vec{B} divided by the permeability of free space which is equal to one in electromagnetic units. Thus in electromagnetic units \vec{H} and \vec{B} are numerically equal but physically distinct fields. In this discussion the three magnetic induction components.

$$B_r, B_\theta, B_\phi$$

are used where r , θ , and ϕ are spherical coordinates with respect to the earth's center. The polar axis will be identified with the geographic axis in such a way that $\theta = 0$ at the north pole (thus θ measures south co-latitude rather than latitude). The azimuthal coordinate ϕ is taken as geographic longitude, east of Greenwich meridian. The earth's radius is symbolized by R and was taken to be 6371.2 kilometers in these calculations.

Charts of the magnetic field at different epochs are available from various agencies. The United States Naval Hydrographic Office has undertaken to produce up-to-date compilations at regular intervals. The data on these charts are used as input to analyses described below.

Other agencies (especially in the Soviet Union) have also produced up-to-date charts of the magnetic field and these charts have sometimes been used to modify the standard navy charts. Satellite information has also been used to modify surface observations (see Reference 10).



Spherical Coordinate System

The classical Gaussian analysis of the geomagnetic field requires the use of some rather ponderous classical mathematical analysis since it works with expansions in series of spherical surface harmonics. These classical mathematical techniques are presented in various manners in many different sources. The discussion in Reference 11 is rigorous and complete and provides an excellent introduction to the literature. A more conventional description is given in Reference 12.

The spherical surface harmonics are a double series of functions defined on the surface of a unit sphere with coordinates θ and φ

$$G_{mn} = \cos(m\varphi) P_n^m(\cos \theta) ,$$

$$H_{mn} = \sin(m\varphi) P_n^m(\cos \theta) ,$$

where P_n^m are associated Legendre polynomials as described below; n ranges from zero to infinity and m from 0 to n . It should be noted that $H_{0n} = 0$ for all n . These functions are all mutually orthogonal over the surface of the unit sphere, that is for all m, m', n and n'

$$\int_0^{2\pi} \int_0^\pi \sin \theta G_{mn} H_{m'n'} = 0 ,$$

$$\int_0^{2\pi} \int_0^\pi \sin \theta G_{mn} G_{m'n'} = 0 \text{ if } m' \neq m \text{ or } n' \neq n ,$$

$$\int_0^{2\pi} \int_0^\pi \sin \theta H_{mn} H_{m'n'} = 0 \text{ if } m' \neq m \text{ or } n' \neq n ,$$

Thus any function on the surface of the sphere can be expressed as the sum of series in terms of these functions

$$f(\theta, \varphi) = \sum_{n=0}^{\infty} \left(\sum_{m=0}^n g_{mn} G_{mn} + \sum_{m=1}^n h_{mn} H_{mn} \right)$$

and this expression is unique (with the usual restrictions on discontinuities). As is shown below the coefficients g_{mn} and h_{mn} are easily obtained by integration.

The associated Legendre polynomials are defined in many different ways. Perhaps the most convenient form is the Rodrigues' formula

$$P_n^m(\cos \theta) = (-)^m \frac{n(n-m)!}{2n!} \sin^m \theta \left(\frac{\partial}{\partial \cos \theta} \right)^{m+n} \sin^n \theta .$$

The normalization factor $(n-m)!/2n!$ is that of Reference 13 which has become conventional in a large part of geophysical literature. A factor of $1/2^n n!$ is used in References 11 [also with a $(-)^m$ multiplier] and 12 and most standard references. A change in normalization does not effect the basic procedure but it does change the values of the geomagnetic coefficients g_{mn} and h_{mn} ; for example, the more usual normalization would lead to coefficients which are

$$\frac{2^n n! (n-m)!}{2n!}$$

times the conventional geomagnetic coefficients.

The coefficients g_{mn} and h_{mn} can be obtained in the standard fashion

$$\begin{aligned} \int \partial \theta \sin \theta \int \partial \varphi f(\theta, \varphi) G_{mn} &= g_{mn} \int \partial \theta \sin \theta \int \partial \theta \sin \theta \int \partial \varphi G_{mn}^2 \\ &= g_{mn} \frac{2\pi}{2n+1} \frac{(n+m)!}{(n-m)!^3} \frac{2n!^2}{2^{2n} n!^2} \end{aligned}$$

so that

$$\begin{aligned} g_{mn} &= \frac{\int \partial \theta \sin \theta \int \partial \varphi G_{mn} f(\theta, \varphi)}{\frac{2\pi}{2n+1} \frac{(n+m)!}{(n-m)!^3} \frac{2n!^2}{2^{2n} n!^2}}, \\ h_{mn} &= \frac{\int \partial \theta \sin \theta \int \partial \varphi H_{mn} f(\theta, \varphi)}{\frac{2\pi}{2n+1} \frac{(n+m)!}{(n-m)!^3} \frac{2n!^2}{2^{2n} n!^2}}. \end{aligned}$$

The particular application of these mathematical results which is of interest here is the case where $f(\theta, \varphi)$ is one of the geomagnetic quantities. Since all of the various forces and inductions can be obtained from a geomagnetic potential (if one exists) it is conventional to take f as the geomagnetic potential V on the surface of the earth and use "geomagnetic coefficient" to mean the coefficients in the expansion of V . For example, Gauss described the earth's magnetic field (in Gauss) in the year 1835 by

$$\begin{aligned} g_{00} &= 0, & g_{01} &= +.3235, & g_{11} &= -.0311, & g_{02} &= -.0051, \\ g_{12} &= -.0292, & g_{22} &= +.0002, & h_{11} &= -.0625, \\ h_{12} &= -.0012, & h_{22} &= -.0157. \end{aligned}$$

The geomagnetic potential V is not itself directly observable. The individual forces and inductions, however, are observable and, in electromagnetic units,

$$B_r = -\frac{\partial}{\partial r} V ,$$

$$B_\theta = -\frac{1}{r} \frac{\partial}{\partial \theta} V ,$$

$$B_\varphi = -\frac{1}{r \sin \theta} \frac{\partial}{\partial \varphi} V .$$

Since

$$V = \sum_{n=0}^{\infty} \sum_{m=0}^n (g_{mn} G_{mn} + h_{mn} H_{mn}) ;$$

it follows, for example, that

$$B_\varphi = -\frac{1}{R \sin \theta} \sum_{n=0}^{\infty} \sum_{m=0}^n \left(g_{mn} \frac{\partial}{\partial \varphi} G_{mn} + h_{mn} \frac{\partial}{\partial \varphi} H_{mn} \right) ,$$

and, since $\frac{\partial}{\partial \varphi} G_{mn} = -m H_{mn}$, and $\frac{\partial}{\partial \varphi} H_{mn} = m G_{mn}$,

$$B_\varphi = -\frac{1}{R \sin \theta} \sum_{n=0}^{\infty} \sum_{m=0}^n m (-g_{mn} H_{mn} + h_{mn} G_{mn}) ,$$

so that

$$g_{mn} = \frac{R \sin \theta}{m} \frac{\int_0^{2\pi} \int_0^\pi \sin \theta \frac{\partial \varphi G_{mn}}{\partial \varphi} B_\varphi}{\frac{2\pi}{2n+1} \frac{(n+m)!}{(n-m)!} \frac{2n!}{2^{2n} n!^2}} ,$$

and so on. There is a similar approach based on B_θ . For B_r as will be discussed below it is necessary to introduce a radial dependence.

The analysis just described is an excellent means of studying the geo-magnetic field and its changes so long as attention is confined to the surface of the earth. In order to describe the behavior of charged particles in space it is necessary to extend this knowledge above the earth's surface. For this purpose, some additional assumptions are required because the analysis given above is valid for any function whatsoever defined over the earth's surface. If there were no geo-magnetic potential the only defect in the surface analysis would be that the coefficients derived from B_θ would not equal those from B_φ . Since Maxwell's equations virtually insure the existence of a potential this is a priori unlikely to occur and experience shows that the minor differences which do arise are well within the observational uncertainties.

In order to make an extension of the analysis into space (or to evaluate B_r) it is necessary to assume that the values on the surface are boundary

values of some field which fills space and whose behavior is known. If the field is constant and there are no magnetic sources in space then the potential must, by Maxwell's equations, be magnetostatic and satisfy Laplace's equation:

$$0 = \frac{\partial}{\partial r} \left(r^2 \frac{\partial}{\partial r} V \right) + \frac{1}{\sin^2 \theta} \frac{\partial^2}{\partial \varphi^2} V + \frac{1}{\sin \theta} \frac{\partial}{\partial \theta} \left(\sin \theta \frac{\partial}{\partial \theta} V \right) .$$

The solutions of Laplace's equation (and related material) are well known as the subject matter of potential theory (see, for example, Reference 14). One of the theorems of potential theory states that the potential is uniquely determined by its boundary values.

The magnetic field is definitely not constant. However, the hope is that it can be assumed (a) to be approximately constant (an adiabatic constant in the sense used in the discussion below on the behavior of charged particles) with respect to very long term changes and (b) to smooth over short term changes. The smoothing has not been very carefully standardized—"it is usual to take an annual mean based on quiet days as the value of the main field at any station" (Reference 2). Many of the irregularities arise because the second assumption—no sources in space—is also invalid. Ionospheric currents are easily detectable but these alone do not cause all the variations; some sources of irregularity have never been explained. It is the hope that smoothing will permit the discussion of any adiabatic constant geomagnetic field. In the absence of a definitive treatment of this problem it seems best to proceed with magnetostatic assumption.

The computer codes used in making these computations apply equally well to all the points on the earth's surface. For this reason the data has been extended into close proximity to the magnet and geographic poles. Many geophysicists believe that computations based on the magnetostatic assumption are very inaccurate in the "auroral zone" (say, above about 50° in latitude) because this zone is subject to interference from interplanetary magnetic disturbances and the lines of force originating here extend so far into space that they may not close or may be persistently broken. Until this question is settled the data presented here for the region near the poles should be used with caution.

In this case the extension from boundary value to potential in space is formally immediate because

$$V = \sum_{n=0}^{\infty} \frac{R^{n+1}}{r^{n+1}} \sum_{m=0}^n (g_{mn} G_{mn} + h_{mn} H_{mn})$$

is the unique solution of Laplace's equation which vanishes at infinity such that

$$V = \sum_{n=0}^{\infty} \sum_{m=0}^n (g_{mn} G_{mn} + h_{mn} H_{mn})$$

on the surface. This shows how B_r can be used to determine the coefficients since

$$B_r = -\frac{\partial V}{\partial r} = \sum_{n=0}^{\infty} (n+1) \frac{R^{n+1}}{r^{n+2}} \sum_{m=0}^n (g_{mn} G_{mn} + h_{mn} H_{mn})$$

in general and on the surface

$$B_r = \frac{1}{R} \sum_{n=0}^{\infty} (n+1) \sum_{m=0}^n (g_{mn} G_{mn} + h_{mn} H_{mn}) ,$$

so that

$$g_{mn} = \frac{R}{n+1} \frac{\int \partial \theta \sin \theta \int \partial \phi G_{mn} B_r}{\frac{2\pi}{2n+1} \frac{(n+m)!}{(n-m)!^2} \frac{2n!^2}{2^{2n} n!^2}} ,$$

and so on. The general formulas for B_ϕ and B_θ are easily obtained and closely resemble those for points on the surface.

$$B_\phi = -\frac{1}{\sin \theta} \sum_{n=0}^{\infty} \frac{R^{n+1}}{r^{n+2}} \sum_{m=0}^n m (-g_{mn} H_{mn} + h_{mn} G_{mn}) ,$$

$$B_\theta = -\sum_{n=0}^{\infty} \frac{R^{n+1}}{r^{n+2}} \sum_{m=0}^n (g_{mn} \frac{\partial}{\partial \theta} G_{mn} + h_{mn} \frac{\partial}{\partial \theta} H_{mn}) .$$

It is most convenient to work with a system of units which measure r in earth radii so that $R = 1$ in all the equations given above.

It is easy to conceive how the formulas given could be embodied in a computer program. There is such a program—a subroutine called MAGNET—which originated with Air Force Special Weapons Center, Kirtland A.F.B. This subroutine exists in several different versions depending on the values used for the geomagnetic coefficients. Another form of this subroutine utilizing identical mathematical procedures but written in FAP for speed and convenience in changing geomagnetic coefficients has been prepared at TEMPO. These versions give identical (to five significant figures) results when used with the same coefficients except at poles where the AFSWC version fails to compute B_θ correctly.

Most of the computations reported here used a set of 48 coefficients obtained by D.C. Jensen and J.C. Cain (Reference 15) for epoch 1960; these were compared in some computations to a set of 512 (nominally, actually 568 were used) due to D.C. Jensen and W.A. Whitaker (Reference 16) for epoch 1955. The difference is relatively small. The 48 coefficients of Jensen and Cain are shown in Table A; the Jensen and Whitaker coefficients are shown in Table B. The Jensen and Whitaker coefficients are also reproduced in Reference 10; the version in Table B differs slightly but the difference is probably not significant.

Motion of Charged Particles

The motion of charged particles in a magnetic field is a well-known phenomena. In particular, all the experience of plasma physics is available as well as work in aurora and stellar physics. The motion has been studied in detail (see, for example, Reference 17). Suppose a particle has relativistic mass m and charge e and it moves with (vector) velocity \vec{u} in a magnetic (induction) field \vec{B} then its acceleration \vec{a} is given (in rational electromagnetic units) by

$$\vec{a} = \frac{e}{m} \vec{u} \otimes \vec{B}$$

where \otimes is the vector outer product. If \vec{B} is uniform of strength B in the direction of the z -axis then

$$a_x = \frac{e}{m} B u_y,$$

$$a_y = -\frac{e}{m} B u_x,$$

$$a_z = 0,$$

and the particle moves in the trajectory (assuming it is initially at the origin with velocity \vec{w})

$$x = (w_y + w_x \sin \lambda t - w_y \cos \lambda t) / \lambda,$$

$$y = (-w_x + w_y \sin \lambda t - w_x \cos \lambda t) / \lambda,$$

$$z = w_z t,$$

where the angular frequency $\lambda = \frac{e}{m} B$. The projection on the $x - y$ plane is a circle with its center at $x = w_y / \lambda$, $y = -w_x / \lambda$ and radius w_{\perp} / λ where

Table A. Geomagnetic Coefficients as Given by Jensen and Cain (in Gauss)

$$g_{00} = 0$$

$$g_{01} = +.304112$$

$$g_{02} = +.024035$$

$$g_{03} = -.031518$$

$$g_{04} = -.041794$$

$$g_{05} = +.016256$$

$$g_{06} = -.019523$$

$$g_{11} = +.021474$$

$$g_{12} = -.051253$$

$$g_{13} = +.062130$$

$$g_{14} = -.045298$$

$$g_{15} = -.034407$$

$$g_{16} = -.004853$$

$$h_{11} = -.057989$$

$$h_{12} = +.033124$$

$$h_{13} = +.014870$$

$$h_{14} = -.011825$$

$$h_{15} = -.000796$$

$$h_{16} = -.005758$$

Table A. (Cont.)

$g_{22} = -.013381$	$h_{22} = -.001579$
$g_{23} = -.024898$	$h_{23} = -.004075$
$g_{24} = -.021795$	$h_{24} = +.010006$
$g_{25} = -.019447$	$h_{25} = -.002000$
$g_{26} = +.003212$	$h_{26} = -.008735$
$g_{33} = -.006496$	$h_{33} = +.000210$
$g_{34} = +.007008$	$h_{34} = +.000430$
$g_{35} = -.000608$	$h_{35} = +.004597$
$g_{36} = +.021413$	$h_{36} = -.003406$
$g_{44} = -.002044$	$h_{44} = +.001385$
$g_{45} = +.002775$	$h_{45} = +.002421$
$g_{46} = +.001051$	$h_{46} = -.000118$
$g_{55} = +.000697$	$h_{55} = -.001218$
$g_{56} = +.000227$	$h_{56} = -.001116$
$g_{66} = +.001115$	$h_{66} = -.000325$

Table B. Geomagnetic Coefficients as Given by Jensen and Whitaker

G 0 0 =	-1.81868757E-04		
G 0 1 =	3.03954965E-01		
G 0 2 =	2.33116880E-02		
G 0 3 =	-2.94613826E-02		
G 0 4 =	-3.84925836E-02		
G 0 5 =	1.40194169E-02		
G 0 6 =	-5.53376138E-04		
G 0 7 =	-2.82791689E-02		
G 0 8 =	3.96758285E-02		
G 0 9 =	-5.80275220E-02		
G 010 =	7.16070324E-02		
G 011 =	-1.42793787E-01		
G 012 =	6.65231597E-02		
G 013 =	2.59923062E-02		
G 014 =	-3.89992028E-01		
G 015 =	4.54625410E-01		
G 016 =	-7.67623520E-01		
G 017 =	1.13768254E+00		
G 018 =	6.71064389E-01		
G 019 =	-4.41675669E-01		
G 020 =	2.55144835E+00		
G 021 =	9.11195302E-01		
G 022 =	6.29949319E+00		
G 023 =	1.80562043E+01		
G 024 =	-1.43265873E+01		
G 1 1 =	1.95516829E-02	H 1 1 =	-.56772422E-01
G 1 2 =	-5.00696254E-02	H 1 2 =	.31326689E-01
G 1 3 =	5.67198098E-02	H 1 3 =	.13461722E-01
G 1 4 =	-4.29228514E-02	H 1 4 =	-.42734104E-02
G 1 5 =	-3.92501289E-02	H 1 5 =	.60307983E-03
G 1 6 =	-1.51519343E-02	H 1 6 =	.69540757E-02
G 1 7 =	9.88630116E-04	H 1 7 =	.21372991E-02
G 1 8 =	-2.60652316E-02	H 1 8 =	.22308741E-01
G 1 9 =	-1.36711310E-02	H 1 9 =	-.38442398E-01
G 110 =	7.58558434E-02	H 110 =	.47657927E-01
G 111 =	-2.36752740E-01	H 111 =	-.13708930E+00
G 112 =	3.28001598E-01	H 112 =	.87569359E-01
G 113 =	-4.07894486E-01	H 113 =	.11263226E+00
G 114 =	-1.21878576E-02	H 114 =	.35060196E+00
G 115 =	9.51373816E-01	H 115 =	.13410333E+00
G 116 =	-1.60000132E+00	H 116 =	.94253541E+00
G 117 =	1.62543717E+00	H 117 =	.44449853E+00
G 118 =	1.87724178E-01	H 118 =	-.16294888E+00
G 119 =	-8.28943944E-01	H 119 =	-.22336922E+00
G 120 =	1.30357011E+00	H 120 =	-.10106994E+01
G 121 =	-2.85698953E-01	H 121 =	.52921404E-02
G 122 =	-1.25369941E+00	H 122 =	-.10813708E+01
G 123 =	9.11831880E+00	H 123 =	.95924255E+00
G 124 =	-1.21354425E+01	H 124 =	.25457914E+01

Table B. (Cont.)

G 2 2=	-1.44362517E-02	H 2 2=	-.39770070E-02
G 2 3=	-2.18119371E-02	H 2 3=	-.40692630E-02
G 2 4=	-2.30735725E-02	H 2 4=	.87596376E-02
G 2 5=	-9.90265870E-03	H 2 5=	-.68792437E-02
G 2 6=	-1.33617684E-02	H 2 6=	-.19722961E-01
G 2 7=	2.80319178E-02	H 2 7=	-.31370295E-02
G 2 8=	-5.54907614E-02	H 2 8=	-.50937451E-02
G 2 9=	5.79421985E-02	H 2 9=	-.23562953E-01
G 210=	-9.57042813E-02	H 210=	-.44653744E-01
G 211=	1.10184102E-01	H 211=	-.26703096E-01
G 212=	-3.07802543E-01	H 212=	-.17468439E+00
G 213=	3.15454930E-01	H 213=	-.11858796E+00
G 214=	-7.38183868E-01	H 214=	.19509618E+00
G 215=	1.29783694E+00	H 215=	-.59673567E+00
G 216=	-1.59470893E+00	H 216=	.17438091E+01
G 217=	6.86960286E+00	H 217=	-.40989000E+01
G 218=	-3.88578549E+00	H 218=	.44624547E+01
G 219=	-4.33715057E-01	H 219=	.25762977E+00
G 220=	-4.51282966E+00	H 220=	.52052133E+01
G 221=	4.81428140E+00	H 221=	-.29131021E+01
G 222=	-1.02758293E+01	H 222=	.12025600E+02
G 223=	1.54551627E+01	H 223=	-.90117842E+01
G 224=	-2.61509347E+01	H 224=	.28835645E+02
G 3 3=	-7.87599021E-03	H 3 3=	.37069506E-03
G 3 4=	7.69684792E-03	H 3 4=	.29573649E-02
G 3 5=	4.64784771E-03	H 3 5=	-.82332600E-03
G 3 6=	1.83292185E-02	H 3 6=	.34563800E-02
G 3 7=	1.16323982E-02	H 3 7=	-.92663568E-02
G 3 8=	-1.21336505E-02	H 3 8=	.13198289E-01
G 3 9=	6.20017439E-02	H 3 9=	.44506361E-03
G 310=	-1.04773767E-02	H 310=	-.17950016E-01
G 311=	1.69627547E-01	H 311=	.13344460E+00
G 312=	-3.33588099E-02	H 312=	-.13154834E+00
G 313=	3.93287235E-01	H 313=	.27327400E+00
G 314=	8.75455499E-02	H 314=	-.45138622E+00
G 315=	6.29087347E-01	H 315=	.72092323E+00
G 316=	-7.85736656E-01	H 316=	-.21753822E+00
G 317=	2.54874733E+00	H 317=	.38167326E+00
G 318=	-1.06856495E+01	H 318=	.14819237E+02
G 319=	7.36168706E+00	H 319=	-.85143019E+01
G 320=	-9.39381993E+00	H 320=	.13051635E+02
G 321=	2.17313221E+01	H 321=	-.23914570E+02
G 322=	-8.09967613E+00	H 322=	.10810833E+02
G 323=	5.67008585E+01	H 323=	-.63910954E+02
G 324=	4.85954058E+00	H 324=	-.72432314E+01

• Table B. (Cont.)

G 4 4=	-2.68995824E-03	H 4 4=	.14357304E-02
G 4 5=	2.36998877E-03	H 4 5=	.19446669E-02
G 4 6=	2.07940811E-03	H 4 6=	.26233475E-02
G 4 7=	1.26910639E-03	H 4 7=	-.57251951E-02
G 4 8=	-6.11431164E-03	H 4 8=	.69763496E-02
G 4 9=	-1.14259993E-04	H 4 9=	-.19227442E-02
G 410=	-1.78115948E-02	H 410=	.14025690E-01
G 411=	2.49092811E-02	H 411=	.14587651E-02
G 412=	-9.04762042E-03	H 412=	.32060851E-01
G 413=	3.46934888E-02	H 413=	.21117154E+00
G 414=	7.19249713E-02	H 414=	-.65312709E-01
G 415=	1.61639129E-01	H 415=	.13883826E+01
G 416=	1.09987515E+00	H 416=	-.98344058E+00
G 417=	-1.69762634E-01	H 417=	.42977376E+01
G 418=	3.46227095E-01	H 418=	-.27706360E+01
G 419=	2.12356859E+00	H 419=	-.24920900E+01
G 420=	-8.26668859E+00	H 420=	.37605141E+01
G 421=	2.20897472E+01	H 421=	-.24900554E+02
G 422=	-4.82690144E+01	H 422=	.30410382E+02
G 423=	9.25412357E+01	H 423=	-.10742829E+03
G 424=	-1.74685910E+02	H 424=	.11363591E+03
G 5 5=	1.90808070E-04	H 5 5=	-.39044273E-03
G 5 6=	-3.41266379E-04	H 5 6=	-.57703760E-03
G 5 7=	1.80337308E-03	H 5 7=	.84937564E-03
G 5 8=	-3.72495374E-03	H 5 8=	-.45125045E-02
G 5 9=	6.54090440E-03	H 5 9=	-.20082999E-02
G 510=	-3.22639897E-02	H 510=	.16581872E-01
G 511=	3.00731552E-02	H 511=	.33973354E-01
G 512=	-8.50520551E-02	H 512=	.36425515E-01
G 513=	1.81601094E-01	H 513=	.66510495E-01
G 514=	-3.09801957E-01	H 514=	.20757329E+00
G 515=	2.51311260E-01	H 515=	-.36455151E+00
G 516=	-9.52850389E-01	H 516=	.12680572E+00
G 517=	1.24242945E+00	H 517=	-.17643484E+01
G 518=	-6.84175873E+00	H 518=	-.44801130E+01
G 519=	5.04973274E+00	H 519=	.15298184E+01
G 520=	-1.06697671E+00	H 520=	.46542019E-01
G 521=	9.45154250E+00	H 521=	.14300774E+01
G 522=	-6.90077794E-01	H 522=	.16019346E+02
G 523=	1.28977227E+01	H 523=	-.13329579E+02
G 524=	-3.41950521E+01	H 524=	.11937782E+03

Table B. (Cont.)

G 6 6=	3.72382683E-04	H 6 6=	.31110748E-03
G 6 7=	2.48866597E-04	H 6 7=	.11967165E-03
G 6 8=	-4.30195636E-04	H 6 8=	.13508165E-03
G 6 9=	2.13727152E-03	H 6 9=	-.59623941E-03
G 610=	3.92002609E-04	H 610=	-.39774839E-02
G 611=	5.91470301E-03	H 611=	.14304200E-01
G 612=	-3.50500008E-02	H 612=	-.75366375E-02
G 613=	1.14717758E-01	H 613=	.16425152E-01
G 614=	-6.67961460E-02	H 614=	.19044402E+00
G 615=	2.63254735E-01	H 615=	-.18118073E+00
G 616=	-4.68508679E-01	H 616=	.77385639E+00
G 617=	3.93588877E-01	H 617=	-.93185308E+00
G 618=	-9.46770525E-01	H 618=	.11830100E+01
G 619=	-2.15334615E+00	H 619=	.45361664E+00
G 620=	4.70842755E+00	H 620=	.12137469E+01
G 621=	-3.23913029E+00	H 621=	.51886065E+00
G 622=	1.22418870E+01	H 622=	.34168698E+01
G 623=	-3.41499013E+00	H 623=	-.22478455E+01
G 624=	3.47551903E+01	H 624=	.21725370E+02

G 7 7=	-3.38034552E-04	H 7 7=	.21221215E-03
G 7 8=	3.12339079E-04	H 7 8=	.40195247E-03
G 7 9=	-1.64081767E-04	H 7 9=	-.32573011E-03
G 710=	-3.54309604E-05	H 710=	-.44602487E-03
G 711=	8.74138987E-03	H 711=	-.40131347E-02
G 712=	-2.31940338E-02	H 712=	.11920718E-01
G 713=	9.79040563E-03	H 713=	-.21646387E-02
G 714=	-7.82577634E-03	H 714=	-.25150594E-01
G 715=	4.23793578E-02	H 715=	-.47148820E-01
G 716=	3.14093077E-01	H 716=	-.70200782E-01
G 717=	2.35095525E-01	H 717=	-.63394758E+00
G 718=	-2.27362189E-01	H 718=	.77351442E+00
G 719=	-8.55997884E-01	H 719=	-.22506956E+01
G 720=	2.11810184E-01	H 720=	.60293251E+00
G 721=	-6.79813421E+00	H 721=	.24065237E+01
G 722=	1.59271164E+00	H 722=	.40884249E+01
G 723=	-2.05063617E+01	H 723=	.16366798E+02
G 724=	4.66132146E+00	H 724=	.11242851E+02

Table B. (Cont.)

G 8 8=	-7.84447628E-05	H 8 8=	.78618141E-04
G 8 9=	3.58204448E-04	H 8 9=	.26507891E-03
G 810=	-3.29865205E-04	H 810=	.31687960E-03
G 811=	6.18262714E-04	H 811=	-.24796961E-02
G 812=	-5.38137847E-03	H 812=	.27419954E-02
G 813=	-9.67857158E-03	H 813=	.46908004E-02
G 814=	-1.77339838E-02	H 814=	-.14796194E-01
G 815=	5.60007304E-02	H 815=	-.25111580E-01
G 816=	1.26031697E-01	H 816=	-.15439786E+00
G 817=	-1.30248885E-01	H 817=	-.10635683E+00
G 818=	2.65852699E-01	H 818=	.15451624E+00
G 819=	3.02515981E+00	H 819=	-.27101147E+01
G 820=	-1.31322975E+00	H 820=	-.16310960E+01
G 821=	1.68301795E+00	H 821=	-.20618759E+01
G 822=	-6.81312644E+00	H 822=	-.18742205E+01
G 823=	1.87334432E+01	H 823=	-.28089741E+02
G 824=	-2.00761449E+01	H 824=	.51845120E+01
G 9 9=	2.27598068E-05	H 9 9=	.10934553E-03
G 910=	4.48861927E-04	H 910=	.21485281E-03
G 911=	-5.43971902E-04	H 911=	-.51823650E-03
G 912=	1.20773913E-06	H 912=	-.10370259E-04
G 913=	-4.17231458E-03	H 913=	-.18675102E-02
G 914=	-2.40911657E-02	H 914=	.12845599E-01
G 915=	1.53373276E-02	H 915=	.43221558E-02
G 916=	-3.40123063E-03	H 916=	.68572128E-01
G 917=	-1.36573054E-01	H 917=	.73340895E-01
G 918=	5.69084722E-01	H 918=	-.13342141E+00
G 919=	-3.58062005E-01	H 919=	.25583037E+00
G 920=	-1.42951311E+00	H 920=	.32768912E+01
G 921=	3.46892813E-01	H 921=	-.17114816E+01
G 922=	-1.14053144E+00	H 922=	.26847065E+01
G 923=	1.70650628E+00	H 923=	-.56829415E+01
G 924=	5.27083588E+00	H 924=	-.96297451E+01
G1010=	2.26452458E-05	H1010=	.45036482E-04
G1011=	2.33529708E-04	H1011=	-.36810529E-04
G1012=	-8.91741598E-04	H1012=	-.29591757E-03
G1013=	-1.56877363E-04	H1013=	.22745711E-02
G1014=	-4.35126334E-03	H1014=	.66920146E-03
G1015=	-3.51159173E-03	H1015=	-.17879607E-01
G1016=	3.32822767E-03	H1016=	.33127994E-01
G1017=	-5.77071053E-03	H1017=	-.82620066E-01
G1018=	-4.54620612E-02	H1018=	.41995889E-01
G1019=	2.35214061E-01	H1019=	.21141051E-01
G1020=	-5.10877770E-01	H1020=	.96197826E-01
G1021=	-2.98460230E+00	H1021=	.26562107E+00
G1022=	-4.12052613E+00	H1022=	.20263140E+01
G1023=	-7.74724239E+00	H1023=	.81069597E+00
G1024=	-9.34438992E+00	H1024=	.43509346E+01

Table B. (Cont.)

G1111=	3.11853099E-07	H1111=	.19943533E-04
G1112=	4.61401331E-05	H1112=	.65686716E-04
G1113=	7.00662887E-04	H1113=	-.57514181E-03
G1114=	-1.49686325E-03	H1114=	.19025045E-02
G1115=	6.20740569E-03	H1115=	-.38037015E-02
G1116=	-4.78811705E-03	H1116=	.87781070E-02
G1117=	5.05607700E-02	H1117=	-.11860078E-01
G1118=	2.96481013E-02	H1118=	-.75516208E-02
G1119=	3.37778446E-02	H1119=	-.27742110E+00
G1120=	2.49035451E-01	H1120=	.40644831E+00
G1121=	5.81554365E-01	H1121=	-.62613786E+00
G1122=	3.69804353E-01	H1122=	.96574415E+00
G1123=	2.05693766E+00	H1123=	-.49260746E+00
G1124=	2.26466373E+00	H1124=	.58899468E+01
G1212=	4.97031879E-06	H1212=	-.11532726E-04
G1214=	9.32817745E-05	H1213=	.66208218E-04
G1215=	-1.50069757E-03	H1214=	-.11560561E-03
G1216=	-3.29807943E-03	H1215=	.13216347E-02
G1217=	-2.42404020E-02	H1216=	.39858468E-02
G1218=	-1.18340293E-02	H1217=	.71293963E-03
G1219=	-2.97000375E-02	H1218=	.54699325E-01
G1220=	-8.72789907E-02	H1219=	-.45257668E-01
G1221=	-1.24087340E-01	H1220=	.24349356E+00
G1222=	-3.67687169E-01	H1221=	-.43559620E+00
G1223=	3.53759694E-01	H1222=	.86030682E+00
G1224=	-4.95835471E+00	H1223=	-.40262476E+00
G1313=	1.53294280E-05	H1313=	-.38266698E-05
G1314=	7.45644820E-05	H1314=	.38828054E-03
G1315=	-1.44238126E-04	H1315=	-.20612176E-04
G1316=	-5.87090564E-04	H1316=	.24693960E-02
G1317=	1.70755588E-05	H1317=	.21962900E-02
G1318=	-5.34952754E-03	H1318=	.91944685E-02
G1319=	-6.67326641E-03	H1319=	.21478447E-01
G1320=	8.30221927E-02	H1320=	-.83588941E-01
G1321=	-3.26044178E-01	H1321=	-.11314857E+00
G1322=	7.52621979E-01	H1322=	.23812565E+00
G1323=	-8.81060314E-01	H1323=	-.85692165E+00
G1324=	8.95327234E-01	H1324=	.43386539E+00

Table B. (Cont.)

G1414=	1.63016976E-05	H1414=	-.32505932E-05
G1415=	-2.59073138E-04	H1415=	.49502956E-04
G1416=	3.40091488E-04	H1416=	.48223895E-03
G1417=	-1.41947019E-03	H1417=	.28346161E-02
G1418=	5.83098143E-04	H1418=	.32151694E-02
G1419=	-2.62405512E-03	H1419=	.20337665E-01
G1420=	7.40987337E-03	H1420=	.57944611E-01
G1421=	-5.14948857E-02	H1421=	.15466959E-01
G1422=	-2.18633866E-02	H1422=	-.98059527E-01
G1423=	-7.10342449E-01	H1423=	-.58232037E+00
G1424=	6.16288781E-01	H1424=	-.68287732E+00

G1515=	1.21820159E-05	H1515=	.26172433E-04
G1516=	-1.57948726E-04	H1516=	.30831242E-04
G1517=	8.58468127E-06	H1517=	.28322050E-03
G1518=	-3.73096913E-04	H1518=	.19695519E-02
G1519=	-2.27779779E-04	H1519=	.10243259E-01
G1520=	1.47155267E-02	H1520=	-.64714580E-02
G1521=	2.42504528E-02	H1521=	.51676833E-01
G1522=	1.42425814E-01	H1522=	.96725937E-01
G1523=	2.49694762E-03	H1523=	.43839802E-01
G1524=	4.54553312E-02	H1524=	-.48587178E+00

G1616=	-5.84503371E-06	H1616=	.89085426E-05
G1617=	-1.27970049E-04	H1617=	-.96542149E-04
G1618=	-8.93225408E-05	H1618=	.70450073E-03
G1619=	-6.86292642E-04	H1619=	.17460934E-02
G1620=	9.36995876E-04	H1620=	.19562971E-02
G1621=	1.42977914E-02	H1621=	.23798996E-01
G1622=	4.30475062E-02	H1622=	.23377695E-01
G1623=	-4.11517870E-02	H1623=	.15745310E+00
G1624=	8.54049182E-02	H1624=	-.14425384E+00

G1717=	3.58879706E-06	H1717=	.12514104E-04
G1718=	-8.84852993E-06	H1718=	.15768269E-03
G1719=	-6.74888104E-04	H1719=	.23150870E-03
G1720=	-2.30968866E-05	H1720=	.18252449E-02
G1721=	1.10360624E-03	H1721=	.44591573E-02
G1722=	1.92448065E-02	H1722=	-.80045459E-02
G1723=	8.30055857E-02	H1723=	.41447697E-01
G1724=	-4.15158582E-03	H1724=	-.60527826E-02

$$w_{\perp}^2 = w_x^2 + w_y^2 .$$

The projected motion in the x-y plane is therefore a circular path with period $2\pi/\lambda$. If the angular frequency λ is very large the particle can then be smoothed out over its circular path and viewed as a ring current of (electromagnetic) intensity $e\lambda/2\pi$ and radius w_{\perp}/λ moving along the z-axis with constant velocity w_z . For the geomagnetic field near the earth B is on the order of 0.1 gauss (equals 10^{-5} kg/sec-coulombs) and since e/m for the electrons is approximately 2×10^{11} coulombs/kg it follows that λ is about 2×10^6 revolutions per sec.

Since the rest mass of an electron is equivalent to 0.51 Mev of energy, relativistic corrections are essential for accurate calculations. A 1 Mev electron is moving at almost 95% the speed of light and its mass is increased to 2.94 times its rest mass. Its period is, however, still almost one revolution per micro-second. Since λ depends inversely on particle mass the period of a proton is about 2000 times longer than that of an electron but this is still only a few milliseconds so that the smoothing into a ring current seems to be a valid physical approximation for both particles. The size of the ring is quite modest--even if w_{\perp} is taken as the speed of light the radius for an electron is only a few hundred meters. For protons the radius is considerable if the energy is large and the theory given here must break down for very high energy protons, say above 1 Bev where the radius is about 10 km.

Thus, the charged particle will behave like a small current whirl with the usual dipole moment (in inductive units)

$$M = \frac{1}{2} m w_{\perp}^2 / B_0 ,$$

directed, of course, in such a way as to oppose the field.

The physical picture just described is often called the "guiding center approximation." The particle is replaced by a moving dipole whose position describes the trajectory of the guiding center. In the uniform field for which the picture was developed it is exact but it is also applied to situations in which the field is not uniform. If non-uniformity is introduced slowly enough the motion should be adiabatic (see Reference 18 for a more complete discussion; a really thorough rigorous discussion of this point is still needed), and the dipole moment should behave like a physical invariant. Since the field does no work on the

particle the total velocity is a true invariant. If w is the total velocity then, under the adiabatic assumption,

$$w^2 = w_{\parallel}^2 + w_{\perp}^2 ,$$

(w_{\parallel} is the velocity along the lines of force of the field and w_{\perp} is the velocity "perpendicular" to these lines) so that

$$w^2 = w_{\parallel}^2 + \frac{BM}{\frac{1}{2}m} .$$

Hence if B becomes as large as $\frac{1}{2}mw^2/M$ it is necessary for w_{\parallel} to go to zero.

If a charged particle is introduced into space in the geomagnetic region say with initial velocity w_{\parallel} parallel to magnetic field and w_{\perp} perpendicular to it, then it acquires a magnet moment

$$M = \frac{1}{2}mw_{\perp}^2 / B$$

if B_0 is the initial field strength. It will move along the field lines as determined by the initial component w_{\parallel} . In general the geomagnetic field is such that higher altitudes correspond to smaller fields but each line of force rises to a maximum and then returns to the surface of the earth.

This means that if the initial velocity w is upward the particle will move along the line of force with increasing speed until a maximum is reached and then begin slowing down until it reaches a point where

$$B = \frac{1}{2}mw^2/M = w^2/w_{\perp}^2 B_0 .$$

If the initial velocity is downward the particle goes directly to such a point. If ξ is the initial angle between the velocity and field line when $w = w \sin \xi$ and the relationship becomes $B = \sin^2 \xi B_0$. What happens at this point is not established by earlier discussion. An appeal to the detailed motion of the particle, which will be omitted here, shows that the particle is reflected back into the region of lesser magnetic field.

Such points of velocity direction reversal are called "mirror points." They are defined for any particular particle by the expressions above. Geometrically the mirror points give a method of classifying all the points on a line of force in terms of the value of B at that point. Suppose, for example, the underlying field were given by a dipole of moment m directed along the polar axis of a set of spherical coordinates r, θ, ϕ . Then

$$B_r = \cos \theta / 2\pi r^3 ,$$

$$B_\theta = \sin \theta / 4\pi r^3 ,$$

$$B_\varphi = 0 .$$

The lines of force are given by $r = L \sin^2 \theta$; they are the solutions of the

$$\frac{\partial r}{\partial s} = \frac{B_r}{B} ,$$

$$\frac{\partial \theta}{\partial s} = \frac{B_\theta}{B} ,$$

$$\frac{\partial \varphi}{\partial s} = \frac{B_\varphi}{B} ,$$

where

$$B^2 = B_r^2 + B_\theta^2 = (4\cos^2 \theta + \sin^2 \theta) (m/4\pi r^3)^2 ,$$

so that B is total field strength. If the equation for a line of force is utilized the field strength at colatitude θ along a line of force is seen to be

$$B = \frac{(3\cos^2 \theta + 1)^{\frac{1}{2}} m}{4\pi L^3 \sin^2 \theta} .$$

The derivative of this expression with respect to φ is proportional to $\cos \theta (3 + 2 \cos^2 \theta)$

so that there is a unique minimum B at $\theta = \pi/2$ where $B = m/4\pi L^3$. In this situation the pairs of points with equal latitudes (with colatitudes θ and $\pi/2 - \theta$) are mirror points. The equator can be characterized as those points which mirror to themselves.

There is no a priori reason why there should be only a minimum of B along any line of force but observation and calculations have not uncovered any locations where multiple minima occur. If such multiple minima were found it would mean that some particles could go from mirror point to mirror point about one minimum without even coming into contact with particles moving around another minimum.

The oscillation of a particle between mirror points is accompanied by an additional motion as the guiding center drifts across the magnetic field. This motion is rather slow (in the geomagnetic case) and more difficult to study than the basic case outlined above. The basic reasons for the drift arise from the non-uniformity of the geomagnetic force; other fields also contribute to drift but their contributions are very small; a more detailed discussion is given below. Plainly it is necessary to find some other "constant" of motion to describe the process. An adiabatic "invariant" I has been proposed (by M.N. Rosenbluth, see Reference 19 for this purpose. It appears to be based on the analogy between a particle oscillating between mirror points and a pendulum-type motion in a one-dimensional potential where it corresponds to the action integral

$$J = \oint \partial x \sqrt{2[E - V(x)]} ,$$

where E is energy and $V(x)$ is potential energy.

Since $w^2 = w_{||}^2 + \frac{M}{\frac{1}{2}m} B$ can be written in terms of energy as

$$\frac{1}{2}mw^2 = \frac{1}{2}mw_{||}^2 + MB ,$$

where $\frac{1}{2}mw^2$ can be interpreted as the total energy available for motion and $\frac{1}{2}mw_{||}^2$ as kinetic energy of motion, it follows that MB can be interpreted as potential energy available for motion. Then

$$\begin{aligned} J &= \oint \partial s \sqrt{2 \left(\frac{1}{2}mw^2 - \frac{1}{2}mw_{||}^2 \frac{B}{B_0} \right)} \\ &= \sqrt{m} w \oint \partial s \sqrt{1 - \frac{B}{B_0}} , \end{aligned}$$

because $M = \frac{1}{2}mw^2/B_0$ if B_0 is the field at a mirror point. Since \sqrt{mw} is a constant these can be dropped and

$$I = \oint \partial s \sqrt{1 - \frac{B}{B_0}}$$

(where the integral extends over arc-length from mirror point to mirror point) is an adiabatic invariant (if J is such an invariant, see Reference 19). A proof that I is an adiabatic invariant is presented in Reference 7. Since the argument just presented is highly heuristic such a proof is clearly needed.

The two quantities B_0 and I define a pair of lines (each containing the mirror points of the other) around the world and therefore would be adequate to describe the drifting of particles geometrically but not kinematically. That is, they determine where the particles go but not the rate of movement.

For many purposes the geometry alone is adequate and it is this geometry which is presented in the tables of this report. For the sake of completeness, a brief sketch of the details of motion follows (based on Alfvén, Reference 5 see also Reference 20).

There are two main causes for drift perpendicular to the magnetic field which operate in the absence of other fields—a free dipole with movement M in a non-uniform field will drift as it is acted upon by a force

$$\vec{\nabla} (\vec{M} \cdot \vec{B}) \quad .$$

In the present case, however, the dipole is not free since it is constrained to move along a line of force and another force term must be included to account for the centripetal effect of this constraint. This centrifugal force is given by:

$$mw_{||}^2 \frac{\partial^2 \vec{x}}{\partial s^2}$$

where \vec{x} is the position of the guiding center. Since \vec{x} follows a line of force

$$\frac{\partial \vec{x}}{\partial s} = \frac{\vec{B}}{B}$$

and, therefore

$$\frac{\partial^2 \vec{x}}{\partial s^2} = \frac{1}{B} \vec{\nabla} B \quad .$$

When the non-uniformity force and the constraint force are combined the total effective force is

$$(M + \frac{mw_{||}^2}{B}) \vec{\nabla} B \quad .$$

In order to evaluate the drift consider a change of frame to a system moving with drift velocity \vec{v} . In this new frame the magnetic field will appear to contribute an electric force given, to the first order approximation of the relativistic correction by

$$\vec{E}' = \frac{1}{c} \vec{v} \otimes \vec{B} \quad .$$

Then the force on the particle has been changed to

$$\vec{F} + ce\vec{E}' = \vec{F} + e\vec{v} \otimes \vec{B} \quad ;$$

and this can be made to vanish by taking

$$\vec{v} = \frac{1}{eB^2} \vec{F} \otimes \vec{B} \quad ,$$

which is, therefore, the particle drift velocity.

In terms of the force obtained above

$$\vec{v} = \frac{1}{eB^2} \left(M + \frac{mw_{\parallel}^2}{B} \right) (\vec{\nabla} B \otimes \vec{B}) = \frac{m}{eB^3} \left(\frac{1}{2} w_{\perp}^2 + w_{\parallel}^2 \right) (\vec{\nabla} B \otimes \vec{B}) \quad .$$

Note especially that since the charge e appears it follows that positive and negative particle will drift in opposite directions—electrons move eastward and protons westward in the earth's field. Detailed calculations of the drift velocity for a dipole earth have been made several times (see Reference 20). There it is shown that a 1 Mev electron requires about 30 minutes to orbit the earth.

Geomagnetic Geometry

Since the geometry of motion of trapped particles is governed by the quantities B and I (the subscript zero at mirror point field strengths will be omitted if there is no chance for confusion) it can be visualized in terms of these quantities. I is, however, somewhat awkward to work with; for example, there does not seem to be any closed form expression for

$$I_{DP} = L \int_{\theta_0}^{\frac{1}{2}\pi - \theta_0} \sin \theta [3 \cos^2 \theta + 1]^{\frac{1}{2}} \left[1 - \frac{(3 \cos^2 \theta + 1)^{\frac{1}{2}} \sin^6 \theta_0}{(3 \cos^2 \theta_0 + 1)^{\frac{1}{2}} \sin^6 \theta} \right]^{\frac{1}{2}} d\theta$$

the value of I for a particle mirroring at colatitude θ_0 in a dipole field. This is not especially objectionable on the basis of applications because the earth is not exactly a dipole—the deviation about 5%—but rather because it interferes with intuitive understanding. Such understanding is based, naturally enough, on the traditional dipole representation of the earth which has proved very useful. In an effort to preserve the value of such understanding McIlwain (Reference 21) proposed another quantity L be used instead. Roughly speaking L is the radial distance at the equator which a line of force would have if it were a dipole line rather than a realistic one.

Suppose $\Phi(\theta)$ is the function defined by the integral just quoted so that

$$I_{DP} = L \Phi(\theta) \quad .$$

Since, as shown earlier

$$B = \frac{H}{L^3 \sin^3 \theta} (1 + 3 \cos^2 \theta)^{\frac{1}{2}},$$

$$L^3 B / H = \Phi(\theta) = (1 + 3 \cos^2 \theta)^{\frac{1}{2}} / \sin^3 \theta,$$

and, therefore, if Ω is the functional inverse of Φ

$$I^3 B / H = L^3 B / H \Phi(\theta) = L^3 B / H \Phi[\Omega(L^3 B / H)]$$

so that there is a functional relationship between $I^3 B / H$ and $L^3 B / H$. This can be inverted so that, for some function f ,

$$L^3 B / H = f(I^3 B / H).$$

Thus, if I is known L can be calculated. McIlwain (Reference 21) gives an approximate formula for f and table which is presented in Figure A. A more exact formula, also due to McIlwain (Reference 22) gives

$$\lambda = \log \left(\frac{L^3 B}{H} - 1 \right)$$

as a function of $\mu = \log \left(\frac{I^3 B}{H} \right)$ in the form

$$\lambda = \sum_{n=0}^9 \alpha_n \mu^n,$$

where the α_n are as shown in Table C. This formula improves that of Reference 21 and was used (with one small change) for all the calculations reported here. There is a very recent change included in Table C which was not present in the calculations—it seems that the difference due to this change should be quite small (less than 1%) and then only in the immediate neighborhood of the geomagnetic equator.

The idea behind using L instead of I is that L is geometrically simpler than I but carries all the physical significance of I . This happens because L is almost constant along lines of force—McIlwain reports a maximum percentage deviation of 1%. All the particles which begin to move from any one point spread themselves along the line of force through that point. Then as they drift perpendicular to the field their mirror points sweep out a surface defined by all the lines of constant B and L passing through the initial line of force. In general, lines of force do not lie in this surface and the particles moving between the mirror points do not move on the surface. The separation away from the surface is small however and the concept of "magnetic shell" is valid if it is allowed to have a finite, though small thickness. This shell is uniquely characterized by L up to the variation of L along a

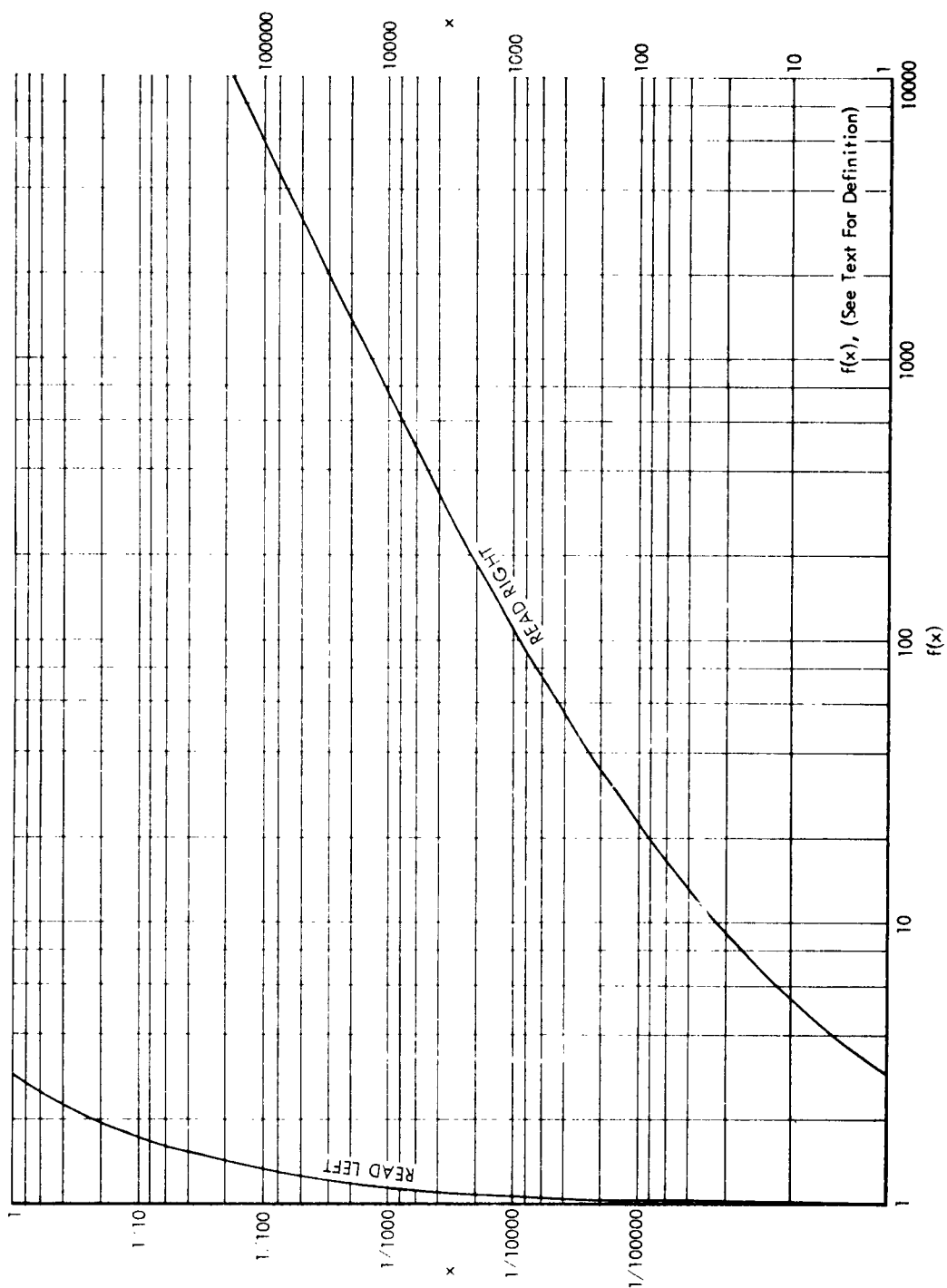


Figure A. Magnetic Shell Function

Table C. Coefficients in polynomial to McIlwain's f

If $\mu \leq -22.0$

$$\alpha_0 = +.30062102$$

$$\alpha_1 = +.333338$$

if $-22.0 < \mu \leq -3.0$

$$\alpha_0 = +.62337691$$

$$\alpha_1 = +.43432642$$

$$\alpha_2 = +.15017245 \cdot 10^{-1}$$

$$\alpha_3 = +.13714667 \cdot 10^{-2}$$

$$\alpha_4 = +.82711096 \cdot 10^{-4}$$

$$\alpha_5 = +.32916354 \cdot 10^{-5}$$

$$\alpha_6 = +.81048663 \cdot 10^{-7}$$

$$\alpha_7 = +.10066362 \cdot 10^{-8}$$

$$\alpha_8 = +.83232531 \cdot 10^{-12}$$

$$\alpha_9 = -.81537735 \cdot 10^{-13}$$

if $-3.0 < \mu \leq +3.0$

$$\alpha_0 = +.6228644$$

$$\alpha_1 = +.43352788$$

$$\alpha_2 = +.14492441 \cdot 10^{-1}$$

$$\alpha_3 = +.11784234 \cdot 10^{-2}$$

$$\alpha_4 = +.38379917 \cdot 10^{-4}$$

$$\alpha_5 = -.33408822 \cdot 10^{-5}$$

$$\alpha_6 = -.53977642 \cdot 10^{-6}$$

$$\alpha_7 = -.21997983 \cdot 10^{-7}$$

$$\alpha_8 = +.23028767 \cdot 10^{-8}$$

$$\alpha_9 = +.26047023 \cdot 10^{-9}$$

if $+3.0 < \mu \leq +11.7$

$$\alpha_0 = +.6222355$$

$$\alpha_1 = +.43510529$$

$$\alpha_2 = +.12817956 \cdot 10^{-1}$$

$$\alpha_3 = +.21680398 \cdot 10^{-2}$$

$$\alpha_4 = -.32077032 \cdot 10^{-3}$$

$$\alpha_5 = +.79451313 \cdot 10^{-4}$$

$$\alpha_6 = -.12531932 \cdot 10^{-4}$$

$$\alpha_7 = +.99766148 \cdot 10^{-6}$$

$$\alpha_8 = -.3958306 \cdot 10^{-7}$$

$$\alpha_9 = +.63271665 \cdot 10^{-9}$$

if $+11.7 < \mu \leq 23$

$$\alpha_0 = +2.0007187$$

$$\alpha_1 = -.18461796$$

$$\alpha_2 = .12038224$$

$$\alpha_3 = -.67310339 \cdot 10^{-2}$$

$$\alpha_4 = +.2170224 \cdot 10^{-3}$$

$$\alpha_5 = -.38049276 \cdot 10^{-5}$$

$$\alpha_6 = +.28212095 \cdot 10^{-7}$$

if $23 < \mu$

$$\alpha_0 = -3.0460681$$

$$\alpha_1 = +1.0$$

line of force. Hence L is called the "magnetic shell radius" or "magnetic shell parameter". This parameter is displayed in detail by the graphs in this report.

The first set of maps (1 through 38) show contours of constant B and L at fixed altitudes. These graphs allow data be reduced in the B and L coordinate system and then replotted in geographic coordinate and conversely. The next set of maps (39 through 48) show curves defined by a fixed pair of B and L values.

The B-L mirror point traces show an unexpected geometric feature which deserves emphasis. All the points above any particular point on the earth's surface belong to different traces depending on the values of B and L at these points. There is not a priori reason why the different traces should not circle the world essentially independently of each other. In matter of fact, however, the different traces all pass over virtually the same points on the surface. What is even more startling is that the opposite mirror points to these points also show the same consistency and "stack" over on another.

Thus, the geometry can be visualized by a set of irregular cones originating at the center of the earth. These cones are paired by containing all the mirror points of one another and can be said to form a system of geomagnetic shell latitudes. These relationships can be most easily visualized on the maps included in report RM 63TMP-2.

DESCRIPTION OF TABLES

The programs used to compute the tables are described very briefly below; more detailed descriptions will appear in the forthcoming TEMPO report. All of the programs are available from the DASA computer library at General Electric, TEMPO.

1. Tables 1 through 32 show the latitude of points with given values of altitude, longitude and either B (the total magnetic field of intensity in gauss) or L (the magnetic shell parameter in earth radii). These positions were obtained from a modified version of the computer program TEST due to C.E. McIlwain which obtains the value of B and L at any specified location. The computations in these tables were all based on the Jensen and Cain set of 48 geomagnetic coefficients.

2. Tables 33 through 48 show the latitude of points with given values of altitude, longitude and B (the total magnetic field intensity in gauss) for value of B especially interesting near the South Atlantic Anomaly where B is minimized. The computational methods used are identical to those used for Tables 1 through 32.
3. Tables 49 through 52 show the same material as Tables 1 through 32 for two altitudes (0 and 500 kilometers) with the difference that these tables were calculated using the Jensen and Whitaker coefficients. Otherwise, the methods are the same as those used for the earlier tables.
4. Tables 53 through 56 show a comparison of the material computed with the Jensen and Cain coefficients and that computed with the Jensen and Whitaker coefficients. The difference is quite small.
5. Tables 57 through 72 show the position and latitude of the traces defined by a fixed pair of B and L for a variety of starting conditions. The invariant I is also preserved along any of the traces. The traces were obtained from a slightly modified version of the program MIRROR due to R. Pennington; MIRROR is, in turn, a modification of the TEST program used for Tables 1 through 56 so that all the calculations are based on the same basic codes. These calculations used only the Jensen and Cain coefficients. There is very little difference in latitude dependence between those traces which originate at different altitudes over the same point. This "stacking" effect can be more easily seen on the maps presented in RM 63TMP-2.
6. Table 73 shows the position of the geomagnetic equator at 100 and at 1500 kilometers altitude. These numbers were obtained by a code written by F.H. Sage which utilized the subroutine MAGNET with the Jensen and Cain coefficients. The equator was found by searching iteratively at every longitude step for that point at the set altitude which was a minimum of B along the line of force through itself. The lines of force are not constrained to a given altitude so it was necessary to constantly correct the calculations to return to the set altitude. The equator as defined here is that point which is a mirror point of itself; each pair of mirror points lie one on each side of this equator.

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*Table 1. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 0 Kilometers

LONG (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=0.60 LAT (DEG)	B=0.65 LAT (DEG)
-180	0.	0.	22.32	36.26	45.78	-28.41	-37.24	-47.64	-62.83
	0.	0.	-0.09	-11.75	-20.27	54.67	65.65	-89.24	-78.24
-170	0.	0.	20.18	34.58	44.51	-31.58	-40.54	-51.05	-68.58
	0.	0.	-2.70	-14.65	-23.24	53.73	64.83	-88.80	-75.72
-160	0.	0.	17.15	31.33	41.56	-34.68	-43.72	-54.36	0.
	0.	0.	-6.07	-17.58	-26.28	51.15	62.74	-88.32	0.
-150	0.	0.	14.89	27.61	37.52	47.10	-46.99	-58.11	0.
	0.	0.	-9.85	-20.84	-29.48	-37.90	58.70	-87.82	0.
-140	0.	0.	12.66	24.15	33.26	42.28	53.21	-62.70	0.
	0.	0.	-13.59	-24.30	-32.90	-41.37	-50.62	-87.30	0.
-130	0.	0.	10.84	21.08	29.41	37.65	47.38	-68.58	0.
	0.	0.	-17.51	-27.94	-36.64	-45.29	-54.93	-86.74	0.
-120	0.	0.	8.92	18.34	26.10	33.68	42.38	59.36	0.
	0.	0.	-21.52	-31.96	-40.94	-49.92	-60.05	65.71	0.
	0.	0.	0.	0.	0.	0.	0.	-76.05	0.
	0.	0.	0.	0.	0.	0.	0.	-86.04	0.
-110	0.	0.	6.95	15.90	23.26	30.44	38.51	50.99	0.
	0.	0.	-26.03	-36.73	-46.03	-55.23	-65.55	-84.91	0.
	0.	0.	0.	0.	0.	0.	0.	-85.02	0.
	0.	0.	0.	0.	0.	0.	0.	69.17	0.
-100	0.	0.	5.21	13.64	20.86	27.92	35.77	47.46	0.
	0.	0.	-31.75	-42.51	-51.68	-60.59	-70.55	69.13	0.
-90	0.	-10.57	3.61	11.82	19.00	26.19	34.28	46.77	0.
	0.	-21.84	-38.76	-48.62	-57.04	-65.25	-74.53	67.13	0.
-80	0.	-8.05	2.92	10.86	18.14	25.68	34.57	51.70	0.
	0.	-33.25	-45.47	-53.94	-61.47	-68.97	-77.53	61.05	0.
-70	0.	-6.10	3.44	11.30	18.91	27.22	37.84	0.	0.
	0.	-41.04	-50.62	-58.02	-64.85	-71.77	-79.52	0.	0.
-60	-20.78	-3.83	5.47	13.62	21.93	31.46	45.40	0.	0.
	-30.16	-46.01	-54.26	-61.04	-67.37	-73.81	-80.99	0.	0.
-50	-16.32	-0.89	8.94	17.81	27.06	38.27	62.85	0.	0.
	-36.10	-49.06	-56.73	-63.16	-69.19	-75.27	-82.00	0.	0.
-40	-16.36	2.36	13.24	22.83	32.93	46.02	-82.66	0.	0.
	-37.08	-50.78	-58.35	-64.66	-70.48	-76.33	80.59	0.	0.
-30	0.	5.20	17.03	27.10	37.88	53.25	-83.07	0.	0.
	0.	-51.41	-59.33	-65.60	-71.32	-77.01	83.04	0.	0.
-20	0.	6.13	19.33	29.72	41.18	58.86	-83.29	0.	0.
	0.	-51.21	-59.76	-66.08	-71.78	-77.38	84.10	0.	0.
-10	0.	4.13	20.09	30.85	42.92	62.26	-81.34	0.	0.
	0.	-50.28	-59.66	-66.15	-71.89	-77.48	84.67	0.	0.

* REFER TO FIGURE 1 (RM 63 TMP-2)

*Table 1 (Cont.)

LONG (DEG)	H=0.25 LAT (DEG)	H=0.30 LAT (DEG)	H=0.35 LAT (DEG)	H=0.40 LAT (DEG)	H=0.45 LAT (DEG)	H=0.50 LAT (DEG)	H=0.55 LAT (DEG)	H=0.60 LAT (DEG)	H=0.65 LAT (DEG)
-0	0. 0.	-25.50 -47.84	19.61 -59.04	30.85 -65.84	43.16 -71.66	63.47 -77.30	-83.23 84.83	0. 0.	0. 0.
10	0. 0.	-38.79 -41.52	18.01 -57.88	29.75 -65.10	42.09 -71.06	62.58 -76.84	-82.94 84.81	0. 0.	0. 0.
20	0. 0.	0. 0.	15.41 -56.11	28.12 -63.73	39.71 -70.03	59.16 -76.02	-82.43 84.55	0. 0.	0. 0.
30	0. 0.	0. 0.	11.28 -53.02	25.38 -61.67	36.43 -68.40	52.95 -74.76	-81.62 83.94	0. 0.	0. 0.
40	0. 0.	0. 0.	6.46 -47.22	22.00 -58.40	32.52 -65.99	45.82 -72.95	82.64 -80.35	0. 0.	0. 0.
50	0. 0.	0. 0.	0. 0.	18.72 -52.73	28.78 -62.23	39.83 -70.20	79.06 -78.56	0. 0.	0. 0.
60	0. 0.	0. 0.	0. 0.	15.83 -37.57	25.89 -55.79	35.61 -65.93	50.97 -75.69	0. 0.	0. 0.
70	0. 0.	0. 0.	0. 0.	12.64 -9.20	23.88 -39.33	32.90 -58.25	43.98 -70.98	0. 0.	0. 0.
80	0. 0.	0. 0.	0. 0.	5.14 4.92	22.55 -16.35	31.26 -39.03	40.59 -61.97	0. 0.	0. 0.
90	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	21.81 -9.39 0. 0.	30.39 -22.22 0. 0.	38.97 -40.84 0. 0.	54.60 61.38 -73.40 -86.08	0. 0. 0. 0.
100	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	21.79 -7.38 0. 0.	30.29 -17.64 0. 0.	38.61 -28.62 0. 0.	-47.20 51.66 66.09 -87.16	0. 0. 0. 0.
110	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	22.77 -7.72 0. 0.	31.24 -16.62 0. 0.	39.62 -25.25 0. 0.	-36.18 53.28 66.65 -88.04	0. 0. 0. 0.
120	0. 0.	0. 0.	0. 0.	11.94 3.87	25.16 -8.84	33.59 -16.83	42.58 -24.47	-33.39 -88.77	-49.07 -71.28
130	0. 0.	0. 0.	0. 0.	17.91 -0.11	28.85 -10.03	37.58 -17.45	47.39 -24.71	-33.04 -89.34	-45.51 -76.33
140	0. 0.	0. 0.	0. 0.	23.69 -2.18	33.74 -11.13	42.71 -18.43	-25.71 53.41	-34.07 -89.73	-46.50 -78.30
150	0. 0.	0. 0.	0. 0.	29.20 -4.30	38.77 -12.61	47.82 -19.97	-27.57 58.98	-36.45 -89.89	-49.55 -79.33
160	0. 0.	0. 0.	19.19 6.74	33.47 -6.48	42.81 -14.73	-22.29 51.77	-30.27 62.98	-39.83 -89.84	-53.91 -79.69
170	0. 0.	0. 0.	22.44 3.02	35.95 -9.02	45.23 -17.34	-25.20 54.05	-33.69 64.93	-43.84 -89.61	-58.37 -79.39

* REFER TO FIGURE 1 (RM 63 IMP-2)

*Table 2. Constant Magnetic Shell Parameter, L (Earth Radii), at Altitude 0 Kilometers

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	11.94 -6.58	22.90 -16.03	31.91 -23.53	40.97 -31.24	46.63 -36.37	-40.32 50.78	-45.70 56.30	-49.60 60.24	65.20 -54.83	68.19 -58.07	70.64 -60.76
-170	9.87 -8.26	20.72 -17.76	29.98 -25.47	39.17 -33.13	45.18 -38.34	49.34 -42.18	-47.73 55.16	58.88 -51.64	63.92 -56.97	67.04 -60.72	69.70 -63.37
-160	7.49 -9.54	18.76 -19.43	27.82 -27.06	37.11 -35.16	43.10 -40.42	47.35 -44.36	53.24 -50.12	57.14 -54.03	62.86 -59.65	65.73 -63.31	68.02 -66.24
-150	5.61 -10.14	17.07 -20.67	26.13 -28.71	35.31 -36.83	41.12 -42.26	45.46 -46.34	51.24 -52.14	55.36 -56.32	60.55 -62.03	63.91 -66.09	66.28 -69.22
-140	3.16 -10.17	15.69 -21.69	24.66 -30.28	33.38 -38.62	39.16 -44.29	43.24 -48.40	49.13 -54.55	52.99 -58.75	58.26 -64.83	61.66 -68.84	64.35 -71.97
-130	0.93 -9.58	14.34 -22.57	23.10 -31.47	31.64 -40.40	37.13 -46.17	41.19 -50.57	46.78 -56.70	50.77 -61.14	55.95 -67.15	59.53 -71.37	61.80 -74.72
-120	-2.06 -7.77	13.00 -23.29	21.69 -32.70	30.12 -42.00	35.39 -48.11	39.22 -52.59	44.78 -59.07	48.41 -63.47	53.55 -69.66	56.88 -73.65	59.63 -76.71
-110	-4.52 -5.76	11.68 -24.11	20.33 -34.10	28.22 -43.87	33.38 -50.27	37.11 -54.90	42.45 -61.19	46.22 -65.66	51.26 -71.48	54.88 -75.56	57.03 -78.42
-100	0. 0.	10.12 -25.20	18.39 -35.65	26.33 -45.79	31.44 -52.14	35.32 -56.74	40.60 -63.08	44.34 -67.36	49.41 -73.08	52.57 -76.84	55.28 -79.88
-90	0. 0.	7.27 -26.23	16.13 -37.20	24.35 -47.51	29.62 -53.99	33.33 -58.47	38.83 -64.83	42.55 -68.87	47.68 -74.47	51.14 -77.89	53.67 -80.65
-80	0. 0.	3.73 -26.87	13.47 -38.51	22.20 -48.95	27.78 -55.37	31.84 -59.88	37.55 -65.83	41.55 -70.05	46.86 -75.33	50.55 -78.69	52.96 -81.16
-70	0. 0.	-0.40 -26.39	11.06 -39.00	20.88 -49.72	26.89 -56.00	31.29 -60.51	37.34 -66.42	41.54 -70.55	47.07 -75.76	50.82 -79.22	53.40 -81.50
-60	0. 0.	-3.68 -24.43	10.20 -38.25	21.05 -49.48	27.52 -55.99	32.13 -60.58	38.50 -66.58	42.75 -70.73	48.46 -75.96	52.09 -79.49	55.07 -81.67
-50	0. 0.	-0.27 -21.28	12.58 -36.18	23.35 -48.09	30.05 -55.24	34.60 -60.08	40.81 -66.29	45.18 -70.57	50.70 -75.90	54.44 -79.47	56.87 -81.67
-40	0. 0.	7.24 -18.09	18.30 -32.73	27.28 -45.66	33.16 -53.32	37.48 -58.58	43.56 -65.52	47.62 -70.07	53.09 -75.60	56.66 -79.17	59.47 -81.51
-30	0. 0.	13.56 -14.95	23.12 -28.43	31.36 -41.86	36.56 -50.51	40.57 -56.32	46.26 -64.00	50.36 -68.82	55.63 -75.05	59.15 -78.59	61.55 -81.18
-20	0. 0.	18.24 -11.76	26.90 -24.11	34.79 -37.27	39.66 -46.46	43.12 -53.07	48.65 -61.70	52.46 -67.09	57.64 -73.78	61.13 -77.72	63.67 -80.67
-10	0. 0.	21.96 -9.56	30.10 -20.49	37.16 -32.67	41.79 -41.84	45.37 -48.99	50.66 -58.73	54.53 -65.03	59.68 -72.15	62.85 -76.59	65.50 -79.95

* REFER TO FIGURE 1 (RM 63 TMP-2)

*Table 2 (Cont.)

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	11.79 6.98	25.11 -7.80	32.13 -17.67	39.16 -28.85	43.63 -37.43	46.91 -44.57	52.01 -55.11	55.92 -61.85	60.99 -70.28	64.53 -75.22	66.76 -78.43
10	17.09 4.36	26.85 -6.73	33.70 -15.84	40.46 -26.08	45.00 -33.99	47.95 -40.65	53.22 -51.08	57.00 -58.43	62.05 -67.46	65.59 -72.90	67.91 -76.65
20	19.49 3.35	27.82 -6.57	34.52 -15.09	41.04 -24.55	45.55 -31.78	48.79 -37.86	54.19 -54.19	57.84 -55.06	62.93 -64.53	66.35 -70.38	68.94 -74.47
30	20.06 1.73	27.83 -7.34	34.52 -15.34	41.17 -24.18	45.83 -30.85	49.44 -36.36	54.83 -54.83	58.46 -51.93	63.62 -61.21	66.98 -67.14	69.79 -71.45
40	19.37 -0.46	27.20 -8.83	34.04 -16.25	41.06 -24.61	45.92 -30.74	49.73 -35.73	54.62 -55.16	58.74 -58.88	64.14 -58.17	67.48 -63.97	70.28 -68.14
50	18.91 -2.22	26.79 -10.34	33.74 -17.25	41.05 -25.19	46.04 -30.84	49.96 -35.44	54.45 -55.37	58.82 -59.20	64.53 -55.58	67.87 -60.85	70.60 -64.93
60	20.12 -3.77	27.35 -11.14	34.22 -17.86	41.38 -25.45	46.32 -30.79	50.20 -50.20	54.42 -55.57	58.25 -59.47	64.85 -53.12	68.19 -57.90	70.88 -61.52
70	21.84 -4.58	28.69 -11.38	35.19 -17.94	41.95 -25.33	46.75 -30.46	50.51 -50.51	54.43 -55.81	58.89 -59.75	65.09 -51.00	68.48 -55.41	71.12 -58.56
80	23.61 -4.77	30.06 -11.30	35.97 -17.74	42.56 -25.04	47.21 -30.01	50.85 -50.85	54.36 -56.08	58.35 -60.04	64.13 -65.27	68.75 -52.95	71.34 -55.95
90	24.61 -5.02	30.64 -11.36	36.48 -17.69	43.01 -24.81	47.60 -29.59	51.17 -51.17	54.44 -56.36	58.20 -60.27	64.47 -65.48	69.03 -51.12	71.56 -53.83
100	24.51 -5.47	30.66 -11.80	36.62 -18.05	43.26 -24.99	47.88 -29.56	51.44 -51.44	54.95 -56.64	58.55 -60.52	64.47 -65.72	69.32 -50.07	71.77 -52.20
110	23.57 -6.06	30.27 -12.48	36.49 -18.69	43.37 -25.36	48.10 -29.90	51.70 -51.70	54.90 -56.94	58.35 -60.80	64.05 -65.96	69.31 -69.62	71.97 -51.42
120	22.40 -6.36	29.71 -12.99	36.30 -19.26	43.48 -25.77	48.35 -30.27	51.98 -51.98	54.16 -57.27	58.50 -61.09	64.08 -66.21	69.23 -69.91	72.14 -51.27
130	21.46 -6.01	29.22 -13.00	36.23 -19.52	43.67 -26.09	48.65 -30.63	52.29 -52.29	54.69 -57.60	58.96 -61.37	64.50 -66.42	69.80 -70.07	72.24 -51.65
140	20.65 -5.08	28.85 -12.56	36.20 -19.49	43.84 -26.37	48.90 -31.05	52.56 -52.56	54.52 -57.86	58.76 -61.57	64.35 -66.55	70.12 -50.57	72.24 -52.60
150	19.35 -3.61	28.23 -12.18	35.96 -19.61	43.79 -26.85	48.95 -31.73	52.63 -52.63	54.53 -57.94	58.04 -61.61	64.75 -66.52	70.06 -51.77	72.10 -54.26
160	17.15 -3.26	27.04 -12.55	35.29 -20.31	43.33 -27.83	48.62 -32.87	52.39 -52.39	54.82 -57.74	58.60 -61.42	66.30 -50.51	69.75 -53.66	71.79 -56.00
170	14.82 -4.84	25.31 -14.14	33.85 -21.64	42.35 -29.49	47.84 -34.62	51.77 -51.77	54.66 -57.19	58.32 -60.96	65.86 -52.34	69.11 -55.80	71.30 -58.18

* REFER TO FIGURE 1 (RM 63 TMP-2)

*Table 3. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 100 Kilometers

LONG (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=0.60 LAT (DEG)
-180	0. 0.	0. 0.	27.57 -5.12	39.69 -15.18	49.22 -23.95	-32.70 59.10	-42.62 0.	-55.29 -83.96
-170	0. 0.	0. 0.	25.62 -7.80	38.15 -18.22	48.11 -27.00	-35.93 58.28	-45.99 0.	-59.14 -83.29
-160	0. 0. 0.	0. 0. 0.	22.54 -10.92 0.	35.17 -21.23 0.	45.39 -30.06 0.	-39.08 55.90 0.	-49.25 74.86 80.80	-63.52 -82.10 0.
-150	0. 0. 0.	0. 0. 0.	19.66 -14.26 0.	31.37 -24.42 0.	41.44 -33.27 0.	-42.35 52.04 0.	69.79 -52.77 81.62	-69.64 -79.64 0.
-140	0. 0. 0.	0. 0. 0.	16.95 -17.78 0.	27.65 -27.81 0.	37.06 -36.71 0.	47.12 -45.90 0.	63.08 -56.82 82.11	0. 0. 0.
-130	0. 0. 0.	0. 0. 0.	14.67 -21.52 0.	24.35 -31.48 0.	32.97 -40.51 0.	42.15 -49.99 0.	55.17 -61.75 82.29	0. 0. 0.
-120	0. 0. 0.	0. 0. 0.	12.38 -25.48 0.	21.44 -35.59 0.	29.45 -44.94 0.	37.86 -54.86 0.	48.98 -67.51 87.18	0. 0. 0.
-110	0. 0. 0.	-4.76 -12.41 0.	10.37 -30.02 0.	18.87 -40.46 0.	26.51 -50.11 0.	34.40 -60.21 0.	44.39 -73.32 81.74	0. 0. 0.
-100	0. 0. 0.	-4.55 -20.25 0.	8.31 -35.67 0.	16.62 -46.14 0.	24.09 -55.60 0.	31.88 -65.36 0.	41.58 -78.20 80.86	0. 0. 0.
-90	0. 0. 0.	-4.46 -28.60 0.	6.72 -42.15 0.	14.85 -51.86 0.	22.35 -60.61 0.	30.25 -69.67 0.	40.31 -81.56 79.37	0. 0. 0.
-80	0. 0. 0.	-4.02 -37.06 0.	5.95 -48.19 0.	13.93 -56.75 0.	21.67 -64.66 0.	30.10 -73.04 0.	41.76 -83.65 76.95	0. 0. 0.
-70	0. 0. 0.	-2.90 -43.62 0.	6.41 -52.88 0.	14.50 -60.53 0.	22.74 -67.78 0.	32.31 -75.44 0.	47.77 -84.86 71.73	0. 0. 0.
-60	-14.44 -35.18	-0.78 -48.03	8.46 -56.29	17.03 -63.31	26.12 -70.06	37.51 -77.25	-85.93 0.	0. 0.
-50	-11.42 -39.39	2.24 -50.92	12.11 -58.63	21.43 -65.33	31.66 -71.75	45.58 -78.49	-86.42 0.	0. 0.
-40	-9.77 -40.74	5.91 -52.52	16.58 -60.23	26.60 -66.71	37.89 -72.92	55.33 -79.32	-86.68 0.	0. 0.
-30	-12.20 -39.24	9.09 -53.27	20.49 -61.13	30.96 -67.59	43.23 -73.68	64.28 -79.86	-86.85 0.	0. 0.
-20	0. 0.	10.85 -53.25	22.91 -61.52	33.79 -68.05	47.08 -74.09	69.47 -80.15	-86.98 0.	0. 0.

* REFER TO FIGURE 2 (RM 63 TMP-2)

*Table 3 (Cont.)

LONG (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=0.60 LAT (DEG)
-10	0. 0.	10.74 -52.49	23.89 -61.46	35.09 -68.12	49.26 -74.18	71.88 -80.22	-87.09 0.	0. 0.
-0	0. 0.	7.99 -51.09	23.78 -60.95	35.26 -67.80	49.81 -73.95	72.74 -80.05	-87.18 0.	0. 0.
10	0. 0.	-26.36 -48.47	22.76 -59.99	34.43 -67.05	48.80 -73.37	72.45 -79.65	-87.25 0.	0. 0.
20	0. 0.	-36.32 -42.31	20.85 -58.14	32.65 -65.82	46.16 -72.40	70.84 -78.96	-87.26 0.	0. 0.
30	0. 0.	0. 0.	17.86 -55.48	29.88 -63.84	42.37 -70.90	66.70 -77.91	-87.07 0.	0. 0.
40	0. 0.	0. 0.	14.50 -50.69	26.56 -60.85	37.95 -68.65	57.79 -76.31	-85.73 0.	0. 0.
50	0. 0.	0. 0.	10.74 -38.09	23.28 -55.91	33.78 -65.29	48.31 -73.91	-84.08 0.	0. 0.
60	0. 0.	0. 0.	4.72 -4.97	20.62 -45.72	30.55 -59.77	42.16 -70.22	-82.21 0.	0. 0.
70	0. 0.	0. 0.	0. 0.	18.41 -19.03	28.38 -48.34	38.38 -64.02	-78.66 0.	0. 0.
80	0. 0. 0.	0. 0. 0.	0. 0. 0.	16.60 -6.85 0.	27.03 -24.81 0.	36.17 -50.87 0.	49.08 72.80 -71.95	0. 0. 0.
90	0. 0. 0.	0. 0. 0.	0. 0. 0.	15.42 -1.28 0.	26.31 -15.40 0.	34.98 -30.16 0.	45.87 76.69 -56.65	0. 0. 0.
100	0. 0. 0.	0. 0. 0.	0. 0. 0.	15.30 -0.06 0.	26.26 -12.46 0.	34.79 -23.14 0.	44.94 -37.00 78.72	0. 0. 0.
110	0. 0. 0.	0. 0. 0.	0. 0. 0.	16.49 -1.06 0.	27.15 -12.10 0.	35.80 -21.09 0.	46.30 -31.04 79.85	-48.39 -76.82 0.
120	0. 0. 0.	0. 0. 0.	0. 0. 0.	19.28 -2.90 0.	29.37 -12.69 0.	38.31 -20.78 0.	49.70 -29.32 80.59	-41.17 -81.15 0.
130	0. 0. 0.	0. 0. 0.	0. 0. 0.	23.15 -4.79 0.	33.03 -13.53 0.	42.48 -21.21 0.	-29.27 55.91 80.89	-39.73 -82.75 0.
140	0. 0. 0.	0. 0. 0.	0. 0. 0.	28.04 -6.24 0.	37.78 -14.59 0.	47.69 -22.17 0.	-30.25 63.88 80.81	-40.80 -83.64 0.
150	0. 0. 0.	0. 0. 0.	20.19 3.86 0.	32.99 -7.90 0.	42.61 -16.09 0.	-23.82 52.70 0.	-32.36 71.58 80.41	-43.53 -84.12 0.
160	0. 0.	0. 0.	25.25 0.46	36.97 -10.08	46.43 -18.23	-26.29 56.41	-35.32 0.	-47.36 -84.32
170	0. 0.	0. 0.	27.57 -2.20	39.29 -12.55	48.67 -20.95	-29.36 58.52	-38.96 0.	-51.46 -84.27

* REFER TO FIGURE 2 (RM 63 IMP-2)

*Table 4. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 100 Kilometers

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	8.87 -3.44	21.63 -14.90	31.07 -22.65	40.39 -30.69	46.13 -35.92	-39.94 50.37	-45.40 55.96	-49.25 59.97	65.01 -54.53	67.96 -57.85	70.49 -60.60
-170	6.39 -5.31	19.47 -16.51	29.00 -24.64	38.46 -32.50	44.60 -37.82	48.79 -41.75	-47.37 54.76	58.50 -51.36	63.61 -56.73	66.82 -60.53	69.45 -63.16
-160	3.68 -5.81	17.41 -18.00	26.94 -26.24	36.48 -34.50	42.53 -39.98	46.88 -43.87	-49.74 52.82	56.80 -53.68	61.99 -59.35	65.54 -63.06	67.80 -66.04
-150	1.05 -5.63	15.82 -19.35	25.33 -27.79	34.67 -36.24	40.63 -41.76	45.05 -45.93	50.89 -51.78	55.08 -56.03	60.32 -61.77	63.63 -65.87	66.09 -68.95
-140	0. 0.	14.32 -20.45	23.67 -29.35	32.71 -37.95	38.57 -43.72	42.75 -47.93	48.69 -54.13	52.64 -58.39	57.96 -64.49	61.44 -68.54	64.10 -71.71
-130	0. 0.	12.78 -21.20	22.17 -30.64	31.03 -39.79	36.61 -45.68	40.77 -50.16	46.43 -56.33	50.49 -60.83	55.72 -66.85	59.25 -71.10	61.61 -74.38
-120	0. 0.	11.53 -21.82	20.82 -31.80	29.41 -41.37	34.91 -47.55	38.71 -52.11	44.35 -58.61	48.08 -63.07	53.28 -69.27	56.68 -73.30	59.41 -76.42
-110	0. 0.	10.32 -22.53	19.34 -33.10	27.53 -43.14	32.82 -49.70	36.67 -54.32	42.09 -60.79	45.96 -65.33	51.06 -71.17	54.63 -75.29	56.87 -78.07
-100	0. 0.	8.34 -23.50	17.39 -34.72	25.73 -45.15	30.95 -51.55	34.92 -56.24	40.30 -62.61	44.01 -66.96	49.15 -72.71	52.39 -76.53	55.16 -79.50
-90	0. 0.	5.72 -24.63	15.26 -36.20	23.62 -46.76	29.03 -53.30	32.87 -57.88	38.45 -64.27	42.26 -68.41	47.46 -74.04	50.99 -77.55	53.51 -80.40
-80	0. 0.	1.81 -25.14	12.44 -37.38	21.56 -48.10	27.26 -54.73	31.43 -59.21	37.22 -65.41	41.29 -69.55	46.66 -75.04	50.41 -78.32	52.80 -80.90
-70	0. 0.	-2.79 -24.19	10.15 -37.77	20.29 -48.79	26.40 -55.39	30.89 -60.00	37.00 -65.96	41.27 -70.18	46.85 -75.46	50.66 -78.83	53.22 -81.23
-60	0. 0.	-6.37 -21.41	9.07 -37.02	20.42 -48.53	26.98 -55.35	31.68 -60.05	38.10 -66.10	42.42 -70.35	48.18 -75.64	51.88 -79.08	54.87 -81.39
-50	0. 0.	-3.61 -17.70	11.55 -35.06	22.60 -47.19	29.40 -54.47	34.03 -59.36	40.46 -65.81	44.84 -70.18	50.46 -75.58	54.13 -79.05	56.65 -81.39
-40	0. 0.	4.82 -15.58	17.08 -31.52	26.57 -44.82	32.56 -52.53	36.97 -57.86	43.11 -65.05	47.25 -69.51	52.77 -75.27	56.41 -78.75	59.17 -81.22
-30	0. 0.	11.30 -12.55	21.97 -27.27	30.69 -41.02	36.03 -49.78	40.16 -55.68	45.89 -63.35	50.07 -68.25	55.38 -74.54	58.83 -78.16	61.32 -80.89
-20	0. 0.	16.33 -10.08	25.92 -23.05	33.97 -36.49	39.03 -45.77	42.68 -52.36	48.23 -61.12	52.11 -66.56	57.34 -73.26	60.90 -77.31	63.39 -80.38
-10	0. 0.	20.45 -7.83	28.98 -19.58	36.51 -31.99	41.29 -41.21	44.89 -48.31	50.35 -58.06	54.14 -64.36	59.34 -71.67	62.58 -76.19	65.32 -79.45

• REFER TO FIGURE 2 (RM 63 TMP-2)

*Table 4 (Cont.)

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	0. 0.	23.38 -6.41	31.24 -16.85	38.45 -28.25	43.09 -36.90	46.54 -43.98	51.70 -54.47	55.65 -61.29	60.76 -69.77	64.23 -74.74	66.55 -77.95
10	0. 0.	25.59 -5.55	32.75 -15.13	39.92 -25.59	44.43 -33.53	47.61 -40.22	52.87 -50.59	56.71 -57.83	61.80 -66.91	65.40 -72.36	67.69 -76.20
20	15.87 7.11	26.53 -5.49	33.56 -14.33	40.52 -24.05	45.17 -31.40	48.47 -37.48	51.79 53.83	55.55 -54.49	62.68 -63.90	66.16 -69.89	68.71 -73.86
30	16.74 4.32	26.60 -6.26	33.60 -14.64	40.67 -23.70	45.44 -30.49	49.03 -36.01	54.89 54.47	58.17 -51.49	63.38 -60.73	66.79 -66.61	69.57 -70.94
40	16.61 2.25	26.08 -7.67	33.19 -15.60	40.58 -24.11	45.54 -30.37	49.31 -35.39	54.23 54.89	58.29 58.60	63.91 -57.68	67.30 -63.42	70.16 -67.60
50	16.58 -0.28	25.77 -9.21	32.96 -16.57	40.59 -24.70	45.67 -30.46	49.55 -35.10	54.09 55.13	58.43 58.93	64.31 -55.21	67.71 -60.45	70.49 -64.38
60	17.90 -1.76	26.33 -10.22	33.43 -17.15	40.91 -25.01	45.96 -30.41	49.88 -34.69	54.10 55.35	58.94 59.22	64.64 -52.74	68.04 -57.49	70.78 -61.14
70	20.32 -2.69	27.62 -10.48	34.45 -17.24	41.48 -24.86	46.38 -30.09	50.23 50.23	54.15 55.59	58.54 59.51	64.95 -50.72	68.34 -55.14	71.03 -58.19
80	21.98 -3.01	28.94 -10.44	35.36 -17.06	42.08 -24.49	46.83 -29.55	50.57 50.57	55.03 55.86	59.06 59.83	64.84 65.16	68.63 -52.68	71.26 -55.72
90	22.92 -3.32	29.76 -10.50	35.86 -17.02	42.53 -24.26	47.22 -29.14	52.74 50.88	58.14 56.14	61.96 60.11	67.25 65.38	68.91 -50.94	71.48 -53.60
100	22.84 -3.91	29.78 -10.91	35.99 -17.35	42.77 -24.42	47.50 -29.10	52.55 51.15	57.67 56.42	61.33 60.37	66.30 65.60	69.90 69.20	71.69 -52.05
110	21.99 -4.62	29.26 -11.51	35.86 -17.93	42.87 -24.90	47.71 -29.41	52.69 51.40	57.61 56.72	61.14 60.63	65.90 65.85	69.13 69.49	71.89 -51.30
120	20.89 -4.93	28.60 -11.94	35.67 -18.45	42.96 -25.31	47.94 -29.87	53.04 51.66	57.86 57.03	61.28 60.91	65.93 66.08	69.05 69.76	72.04 -51.17
130	19.92 -4.28	28.09 -11.91	35.57 -18.66	43.11 -25.60	48.20 -30.25	53.51 51.95	58.36 57.33	61.72 61.17	66.33 66.28	69.60 69.96	72.11 -51.54
140	18.59 -2.81	27.69 -11.47	35.50 -18.62	43.25 -25.86	48.42 -30.65	54.17 52.18	59.16 57.56	62.49 61.34	67.15 66.38	70.02 -50.45	72.12 -52.45
150	16.90 -1.33	27.04 -11.08	35.24 -18.72	43.16 -26.31	48.43 -31.29	55.12 52.22	60.27 57.61	63.73 61.37	68.51 66.34	69.90 -51.61	71.97 -54.07
160	14.77 -0.76	25.88 -11.39	34.42 -19.49	42.68 -27.25	48.08 -32.39	56.21 51.96	61.51 57.38	65.36 61.16	66.10 -50.33	69.52 -53.45	71.65 -55.86
170	11.60 -1.55	23.97 -12.79	32.93 -20.87	41.73 -28.82	47.30 -34.07	57.82 51.34	63.29 56.83	67.03 60.70	65.66 -52.11	68.87 -55.64	71.15 -57.98

• REFER TO FIGURE 2 (RM 63 TYP-2)

*Table 5. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 200 Kilometers

LONG (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=0.60 LAT (DEG)
-180	0.	0.	31.68	42.98	-27.78	-37.35	-48.84	0.
	0.	0.	-9.06	-18.84	52.94	64.58	-88.08	0.
-170	0.	0.	29.99	41.67	-30.89	-40.64	-52.41	0.
	0.	0.	-11.87	-21.78	51.95	63.90	-87.67	0.
-160	0.	0.	26.93	38.82	49.42	-43.88	-55.97	0.
	0.	0.	-14.94	-24.80	-34.00	61.82	-87.21	0.
-150	0.	0.	23.70	35.08	45.60	-47.26	-59.97	0.
	0.	0.	-18.05	-27.95	-37.24	58.11	-86.71	0.
-140	0.	3.87	20.74	31.19	41.13	53.04	-65.16	0.
	0.	-5.73	-21.51	-31.36	-40.71	-51.01	-86.14	0.
-130	0.	3.66	18.02	27.64	36.81	47.60	-72.61	0.
	0.	-10.84	-25.19	-35.06	-44.64	-55.42	-85.46	0.
-120	0.	2.73	15.65	24.57	33.07	42.82	0.	0.
	0.	-15.43	-29.07	-39.26	-49.25	-60.61	0.	0.
-110	0.	1.57	13.37	21.90	29.96	39.05	55.10	0.
	0.	-20.13	-33.66	-44.22	-54.47	-66.09	66.31	0.
-100	0.	0.46	11.34	19.63	27.57	36.46	51.10	0.
	0.	-25.85	-39.30	-49.79	-59.77	-71.03	66.98	0.
-90	0.	-0.42	9.74	17.89	25.92	34.99	50.93	0.
	0.	-33.05	-45.46	-55.18	-64.44	-74.87	64.84	0.
-80	0.	-0.62	8.88	17.12	25.47	35.40	0.	0.
	0.	-40.41	-50.96	-59.68	-68.17	-77.82	0.	0.
-70	-14.13	0.21	9.38	17.86	26.94	38.57	0.	0.
	-31.14	-46.11	-55.28	-63.15	-70.97	-79.74	0.	0.
-60	-10.17	2.14	11.54	20.61	30.80	45.52	0.	0.
	-38.22	-50.18	-58.39	-65.74	-73.05	-81.17	0.	0.
-50	-7.42	5.37	15.35	25.24	36.92	57.97	0.	0.
	-41.84	-52.74	-60.63	-67.61	-74.52	-82.13	0.	0.
-40	-4.88	9.20	19.93	30.58	43.67	82.76	0.	0.
	-43.32	-54.41	-62.09	-68.90	-75.57	72.68	0.	0.
-30	-4.05	12.62	23.91	35.07	49.60	83.15	0.	0.
	-42.83	-55.24	-62.99	-69.75	-76.25	77.96	0.	0.
-20	-8.73	14.80	26.49	38.17	54.16	83.34	0.	0.
	-39.45	-55.34	-63.40	-70.19	-76.60	80.02	0.	0.
-10	0.	15.38	27.65	39.70	56.97	83.38	0.	0.
	0.	-54.87	-63.36	-70.25	-76.67	81.01	0.	0.

* REFER TO FIGURE 3 (RM 63 TMP-2)

*Table 5 (Cont.)

LONG (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=0.60 LAT (DEG)
-0	0. 0.	14.55 -53.58	27.75 -62.85	40.00 -69.94	57.94 -76.45	-83.24 81.40	0. 0.	0. 0.
10	0. 0.	11.92 -51.61	26.97 -61.87	39.73 -69.20	57.06 -75.91	-82.93 81.35	0. 0.	0. 0.
20	0. 0. 0. 0.	5.67 -2.61 -22.98 -48.29	25.31 -60.32 0. 0.	37.39 -67.98 0. 0.	54.21 -74.99 0. 0.	-82.39 80.83 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.
30	0. 0.	-33.80 -40.42	22.66 -57.66	34.50 -66.15	49.62 -73.63	79.64 -81.53	0. 0.	0. 0.
40	0. 0.	0. 0.	19.56 -53.49	31.09 -63.35	44.34 -71.62	76.90 -80.19	0. 0.	0. 0.
50	0. 0.	0. 0.	16.30 -45.32	27.73 -58.97	39.41 -68.58	67.02 -78.32	0. 0.	0. 0.
60	0. 0.	0. 0.	12.97 -18.67	25.02 -50.95	35.59 -63.79	51.85 -75.24	0. 0.	0. 0.
70	0. 0.	0. 0.	7.92 -2.01	23.02 -30.02	33.04 -55.10	45.24 -70.22	0. 0.	0. 0.
80	0. 0.	0. 0.	0. 0.	21.67 -14.00	31.45 -35.15	42.05 -60.67	0. 0.	0. 0.
90	0. 0.	0. 0.	0. 0.	20.91 -7.91	30.60 -21.69	40.27 -40.72	0. 0.	0. 0.
100	0. 0.	0. 0.	0. 0.	20.84 -6.03	30.51 -17.40	39.89 -29.38	-51.16 -85.71	0. 0.
110	0. 0.	0. 0.	0. 0.	21.74 -6.30	31.41 -16.32	41.01 -25.95	-38.61 -86.67	0. 0.
120	0. 0.	0. 0.	0. 0.	23.97 -7.34	33.64 -16.46	43.77 -24.99	-35.18 -87.43	0. 0.
130	0. 0.	0. 0.	11.71 6.23	27.50 -8.54	37.35 -17.07	48.31 -25.19	-34.64 -88.02	-52.15 -70.07
140	0. 0.	0. 0.	19.74 1.50	32.04 -9.85	42.05 -18.06	-26.19 53.77	-35.66 -88.41	-51.85 -73.25
150	0. 0.	0. 0.	25.32 -1.24	36.68 -11.36	46.70 -19.60	-28.00 58.75	-38.00 -88.60	-54.57 -74.78
160	0. 0.	0. 0.	29.41 -3.71	40.41 -13.42	-21.86 50.27	-30.63 62.28	-41.30 -88.58	-59.04 -74.91
170	0. 0.	0. 0.	31.57 -6.32	42.56 -16.01	-24.66 52.40	-33.90 64.10	-45.04 -88.39	-64.43 -72.83

* REFER TO FIGURE 3 (RM 63 TMP-2)

*Table 6. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 200 Kilometers.

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	0. 0.	20.38 -13.36	30.26 -21.79	39.76 -30.15	45.64 -35.47	49.97 -39.44	-45.11 55.62	-48.90 59.57	64.69 -54.24	67.73 -57.64	70.35 -60.45
-170	0. 0.	18.00 -15.30	28.05 -23.66	37.77 -31.89	43.98 -37.31	48.27 -41.34	-47.02 54.29	58.13 -51.08	63.31 -56.49	66.61 -60.35	69.21 -62.95
-160	0. 0.	16.09 -16.61	26.09 -25.44	35.86 -33.81	41.99 -39.40	46.42 -43.39	-49.32 52.42	56.48 -53.35	61.73 -59.06	65.35 -62.82	67.58 -65.85
-150	0. 0.	14.45 -17.79	24.41 -26.90	33.94 -35.66	40.15 -41.27	44.52 -45.53	50.54 -51.44	54.70 -55.74	60.10 -61.51	63.36 -65.65	65.91 -68.69
-140	0. 0.	12.72 -18.90	22.71 -28.36	32.05 -37.31	38.00 -43.17	42.28 -47.47	48.27 -53.71	52.30 -58.04	57.68 -64.16	61.23 -68.26	63.85 -71.46
-130	0. 0.	11.28 -19.81	21.27 -29.77	30.44 -39.07	36.11 -45.21	40.36 -49.69	46.08 -55.98	50.22 -60.52	55.51 -66.55	58.99 -70.84	61.43 -74.05
-120	0. 0.	10.11 -20.38	19.98 -30.92	28.67 -40.75	34.29 -47.01	38.22 -51.64	43.93 -58.18	47.75 -62.69	53.01 -68.91	56.49 -72.98	59.18 -76.14
-110	0. 0.	8.51 -20.97	18.27 -32.13	26.87 -42.44	32.28 -49.07	36.25 -53.76	41.75 -60.41	45.69 -65.00	50.85 -70.87	54.39 -75.04	56.71 -77.75
-100	0. 0.	6.59 -21.75	16.43 -33.62	25.15 -44.38	30.48 -50.99	34.39 -55.75	40.01 -62.16	43.68 -66.57	48.89 -72.36	52.20 -76.24	55.05 -79.14
-90	0. 0.	3.79 -22.58	14.19 -35.25	22.91 -46.04	28.46 -52.64	32.42 -57.31	38.09 -63.74	41.98 -67.96	47.24 -73.64	50.85 -77.23	53.34 -80.17
-80	0. 0.	-0.05 -22.74	11.44 -36.30	20.95 -47.29	26.75 -53.99	31.03 -58.57	36.89 -65.01	41.04 -69.06	46.46 -74.63	50.27 -77.97	52.64 -80.66
-70	0. 0.	-5.20 -21.30	8.99 -36.60	19.61 -47.92	25.91 -54.74	30.50 -59.30	36.67 -65.53	41.01 -69.75	46.63 -75.17	50.50 -78.46	53.03 -80.98
-60	0. 0.	-10.88 -16.48	7.91 -35.85	19.75 -47.63	26.45 -54.66	31.24 -59.36	37.71 -65.65	42.11 -69.98	47.91 -75.34	51.67 -78.70	54.62 -81.13
-50	0. 0.	-9.81 -10.30	10.53 -33.67	21.88 -46.34	28.74 -53.66	33.48 -58.64	40.12 -65.35	44.43 -69.72	50.22 -75.27	53.84 -78.66	56.44 -81.12
-40	0. 0.	0.93 -11.48	15.93 -30.35	25.88 -43.84	31.97 -51.78	36.48 -57.19	42.67 -64.42	46.89 -68.95	52.46 -74.93	56.17 -78.35	58.88 -80.95
-30	0. 0.	8.56 -10.10	20.87 -26.13	30.04 -40.22	35.52 -48.94	39.65 -55.08	45.53 -62.73	49.66 -67.71	55.13 -74.03	58.52 -77.76	61.10 -80.62
-20	0. 0.	14.19 -7.70	24.97 -21.98	33.19 -35.74	38.42 -45.11	42.22 -51.69	47.82 -60.58	51.77 -66.06	57.04 -72.78	60.68 -76.91	63.12 -80.10
-10	0. 0.	18.37 -6.07	27.87 -18.57	35.88 -31.33	40.85 -40.61	44.57 -47.65	50.04 -57.43	53.76 -63.72	59.01 -71.22	62.32 -75.81	65.14 -78.98

* REFER TO FIGURE 3 (RM 63 TMP-2)

*Table 6 (Cont.)

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	0. 0.	21.67 -4.99	30.39 -16.01	37.76 -27.65	42.56 -36.38	46.17 -43.42	51.41 -53.83	55.38 -60.76	60.53 -69.16	63.94 -74.18	66.35 -77.50
10	0. 0.	24.03 -4.11	31.85 -14.28	39.19 -25.09	43.87 -33.07	47.27 -39.78	52.55 -50.11	56.43 -57.26	61.56 -66.39	65.23 -71.86	67.48 -75.77
20	0. 0.	25.29 -4.16	32.64 -13.54	40.01 -23.54	44.70 -31.00	48.14 -37.09	46.76 53.50	57.26 -53.95	62.44 -63.32	65.98 -69.28	68.49 -73.30
30	0. 0.	25.41 -5.16	32.72 -13.85	40.17 -23.20	45.06 -30.13	48.62 -35.66	-44.48 54.12	57.88 -51.07	63.13 -60.28	66.61 -66.12	69.36 -70.47
40	12.23 6.17	24.99 -6.50	32.36 -14.94	40.10 -23.60	45.17 -30.01	48.90 -35.06	-42.85 54.54	-48.86 58.33	63.67 -57.23	67.13 -62.91	70.04 -67.09
50	13.46 3.10	24.65 -7.95	32.19 -15.88	40.13 -24.15	45.31 -30.09	49.15 -34.71	-41.74 54.86	-47.06 58.66	64.09 -54.82	67.54 -60.07	70.38 -63.87
60	15.66 0.40	25.33 -9.01	32.67 -16.45	40.46 -24.44	45.60 -30.04	49.49 -34.28	-40.79 55.13	-45.63 58.97	64.44 -52.38	67.89 -57.12	70.67 -60.78
70	18.09 -0.83	26.57 -9.41	33.65 -16.54	41.01 -24.29	46.02 -29.64	49.93 -33.64	-39.83 55.38	-44.19 59.27	64.76 -50.46	68.20 -54.82	70.93 -57.85
80	20.39 -1.28	27.85 -9.42	34.67 -16.39	41.60 -23.93	46.47 -29.10	-32.93 50.29	-38.70 55.65	-42.77 59.60	-48.55 65.05	68.50 -52.42	71.17 -55.51
90	21.27 -1.63	28.61 -9.52	35.24 -16.37	42.04 -23.72	46.84 -28.70	-32.39 50.60	-37.84 55.93	-41.72 59.94	-47.04 65.26	68.79 -50.77	71.40 -53.38
100	21.22 -2.14	28.64 -10.03	35.37 -16.66	42.28 -23.85	47.12 -28.65	-32.20 50.87	-37.39 56.21	-41.11 60.21	-46.13 65.49	-49.69 69.08	71.61 -51.90
110	20.44 -2.66	28.15 -10.56	35.24 -17.19	42.38 -24.29	47.32 -28.93	-32.33 51.11	-37.32 56.49	-40.93 60.47	-45.74 65.72	-48.94 69.36	71.80 -51.19
120	19.07 -2.75	27.51 -10.93	35.04 -17.66	42.45 -24.79	47.53 -29.36	-32.66 51.35	-37.56 56.78	-41.07 60.73	-45.77 65.95	-48.87 69.61	71.95 -51.06
130	17.61 -2.02	27.00 -10.86	34.90 -17.83	42.57 -25.13	47.76 -29.82	-33.11 51.61	-38.04 57.06	-41.49 60.97	-46.16 66.13	-49.41 69.79	72.02 -51.42
140	16.20 -0.61	26.55 -10.42	34.77 -17.78	42.67 -25.37	47.95 -30.26	-33.73 51.81	-38.81 57.26	-42.24 61.12	-46.96 66.21	69.83 -50.32	71.99 -52.32
150	13.98 1.74	25.89 -10.03	34.38 -17.86	42.56 -25.79	47.93 -30.87	-34.70 51.83	-40.01 57.29	-43.44 61.12	-48.28 66.16	69.68 -51.45	71.83 -53.89
160	10.56 3.66	24.67 -10.26	33.47 -18.57	42.06 -26.68	47.56 -31.92	-35.84 51.55	-41.21 57.04	-45.14 60.90	65.91 -50.16	69.30 -53.24	71.50 -55.73
170	5.13 4.88	22.55 -11.49	32.04 -20.13	41.12 -28.18	46.79 -33.54	-37.40 50.93	-42.93 56.49	-46.75 60.44	65.46 -51.88	68.64 -55.47	71.00 -57.80

* REFER TO FIGURE 3 (RM 63 TMP-2)

*Table 7. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 300 Kilometers

LONG (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)
-180	0.	18.35	35.35	46.36	-31.82	-42.52	-56.98
	0.	1.88	-12.64	-22.35	57.09	74.03	-82.10
	0.	0.	0.	0.	0.	86.90	0.
-170	0.	16.53	33.72	45.19	-34.98	-45.90	-61.20
	0.	-1.29	-15.54	-25.34	56.20	73.39	-81.20
	0.	0.	0.	0.	0.	86.99	0.
-160	0.	14.38	30.86	42.52	-38.18	-49.26	-66.75
	0.	-4.87	-18.46	-28.37	53.88	71.28	-79.09
	0.	0.	0.	0.	0.	87.07	0.
-150	0.	12.29	27.46	38.81	-41.46	-52.92	-67.62
	0.	-8.30	-21.62	-31.56	50.18	-52.92	0.
	0.	0.	0.	0.	0.	87.10	0.
-140	0.	10.69	24.24	34.79	-45.65	-57.13	-69.02
	0.	-12.18	-25.05	-34.97	-45.02	-57.13	0.
	0.	0.	0.	0.	0.	87.08	0.
-130	0.	9.00	21.30	31.06	-41.07	-55.04	-66.02
	0.	-16.18	-28.60	-38.74	-49.17	-62.20	0.
	0.	0.	0.	0.	0.	86.97	0.
-120	0.	7.29	18.69	27.80	-37.09	-49.30	-60.03
	0.	-20.25	-32.58	-43.08	-53.99	-68.03	0.
	0.	0.	0.	0.	0.	86.72	0.
-110	0.	5.72	16.35	25.03	-33.82	-44.89	-57.82
	0.	-24.67	-37.28	-48.12	-59.27	-73.82	0.
	0.	0.	0.	0.	0.	86.24	0.
-100	0.	4.11	14.27	22.75	-31.38	-42.27	-53.33
	0.	-30.24	-42.82	-53.54	-64.37	-78.62	0.
	0.	0.	0.	0.	0.	85.33	0.
-90	0.	2.85	12.62	21.09	-29.83	-41.14	-50.17
	0.	-36.82	-48.62	-58.60	-68.71	-81.90	0.
	0.	0.	0.	0.	0.	84.17	0.
-80	-13.58	2.41	11.83	20.44	-29.70	-42.52	-53.86
	-25.62	-43.32	-53.70	-62.76	-72.08	-83.86	0.
	0.	0.	0.	0.	0.	82.15	0.
-70	-9.42	3.06	12.39	21.43	-31.70	-48.01	-57.68
	-35.42	-48.48	-57.67	-65.96	-74.52	-85.00	0.
	0.	0.	0.	0.	0.	77.68	0.
-60	-6.76	5.10	14.69	24.46	-36.30	-56.06	-66.34
	-40.98	-52.16	-60.62	-68.34	-76.35	-86.06	0.
	0.	0.	0.	0.	0.	82.15	0.
-50	-3.83	8.36	18.66	29.39	-43.27	-66.50	-77.64
	-44.22	-54.71	-62.68	-70.05	-77.64	-86.50	0.
	0.	0.	0.	0.	0.	82.15	0.
-40	-0.88	12.37	23.36	34.90	-51.01	-74.74	-86.74
	-45.73	-56.23	-64.11	-71.26	-78.50	-86.74	0.
	0.	0.	0.	0.	0.	82.15	0.
-30	1.28	15.99	27.42	39.64	-57.99	-86.90	-97.05
	-45.75	-57.01	-65.01	-72.03	-79.05	-86.90	0.
	0.	0.	0.	0.	0.	82.15	0.
-20	1.44	18.29	30.09	43.03	-62.88	-97.02	-107.02
	-44.06	-57.19	-65.41	-72.42	-79.33	-86.90	0.
	0.	0.	0.	0.	0.	82.15	0.
-10	-6.03	19.24	31.45	44.84	-65.60	-97.13	-107.13
	-37.74	-56.81	-65.38	-72.46	-79.36	-86.90	0.
	0.	0.	0.	0.	0.	82.15	0.

* REFER TO FIGURE 4 (RM 63 TMP-2)

*Table 7 (Cont.)

LONG (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)
-0	0. 0.	19.02 -55.90	31.70 -64.93	45.36 -72.16	66.62 -79.16	-87.22 0.	0. 0.
10	0. 0.	17.71 -54.27	31.03 -63.94	44.57 -71.48	66.17 -78.70	-87.29 0.	0. 0.
20	0. 0.	15.45 -51.53	29.43 -62.37	42.62 -70.35	64.04 -77.92	-87.29 0.	0. 0.
30	0. 0.	11.70 -46.78	26.96 -60.08	39.50 -68.61	59.56 -76.72	-87.06 0.	0. 0.
40	0. 0.	6.97 -12.82	23.91 -56.25	35.87 -66.06	53.05 -74.89	-85.47 0.	0. 0.
50	0. 0.	0. 0.	20.88 -49.67	32.31 -62.10	46.51 -72.28	-83.97 0.	0. 0.
60	0. 0.	0. 0.	18.11 -32.05	29.38 -55.47	41.53 -68.15	-81.95 0.	0. 0.
70	0. 0. 0.	0. 0. 0.	15.71 -12.04 0.	27.36 -40.73 0.	38.21 -61.11 0.	63.47 65.53 -78.16	0. 0. 0.
80	0. 0. 0.	0. 0. 0.	12.82 -1.91 0.	26.05 -21.17 0.	36.16 -46.27 0.	50.50 77.18 -70.83	0. 0. 0.
90	0. 0. 0.	0. 0. 0.	9.15 4.82 0.	25.35 -13.59 0.	35.05 -28.80 0.	47.49 -54.99 80.97	0. 0. 0.
100	0. 0. 0.	0. 0. 0.	0. 0. 0.	25.30 -10.96 0.	34.88 -22.58 0.	46.64 -37.44 83.23	0. 0. 0.
110	0. 0. 0.	0. 0. 0.	11.15 4.45 0.	26.13 -10.65 0.	35.85 -20.61 0.	47.83 -31.63 84.43	-53.28 -72.12 0.
120	0. 0. 0.	0. 0. 0.	15.47 1.27 0.	28.18 -11.23 0.	38.21 -20.27 0.	-29.77 51.15 85.31	-43.72 -78.81 0.
130	0. 0. 0.	0. 0. 0.	19.85 -1.24 0.	31.60 -12.09 0.	42.03 -20.71 0.	-29.67 56.78 85.92	-41.93 -80.98 0.
140	0. 0. 0.	0. 0. 0.	24.66 -3.19 0.	35.96 -13.18 0.	46.74 -21.68 0.	-30.65 63.37 86.28	-42.75 -81.99 0.
150	0. 0. 0.	0. 0. 0.	29.36 -5.26 0.	40.37 -14.72 0.	-23.29 51.24 0.	-32.65 68.78 86.50	-45.13 -82.51 0.
160	0. 0. 0.	0. 0. 0.	33.03 -7.36 0.	43.86 -16.81 0.	-25.65 54.58 0.	-35.48 72.24 86.66	-48.86 -82.69 0.
170	0. 0. 0.	18.14 4.81 0.	35.17 -9.99 0.	45.93 -19.44 0.	-28.62 56.57 0.	-38.95 73.75 86.79	-52.93 -82.57 0.

* REFER TO FIGURE 4 (IRM 63 TMP-2)

*Table 8. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 300 Kilometers

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	0.	18.84	29.31	39.02	45.17	49.42	-44.75	-48.57	64.37	67.51	70.21
	0.	-11.88	-20.96	-29.50	-35.04	-38.95	55.31	59.19	-53.96	-57.43	-60.30
-170	C.	16.55	27.13	37.10	43.38	47.77	-46.68	57.78	63.02	66.41	68.97
	0.	-13.69	-22.72	-31.30	-36.81	-40.94	53.85	-50.81	-56.27	-60.18	-62.75
-160	C.	14.70	25.26	35.27	41.47	45.98	-48.92	56.17	61.47	65.17	67.37
	0.	-15.27	-24.54	-33.14	-38.83	-42.93	52.03	-53.07	-58.77	-62.59	-65.67
-150	C.	12.77	23.41	33.23	39.58	43.98	50.21	54.30	59.82	63.10	65.74
	C.	-16.28	-26.04	-35.10	-40.80	-45.15	-51.10	-55.46	-61.27	-65.44	-68.44
-140	C.	11.17	21.77	31.42	37.45	41.82	47.87	51.97	57.40	61.03	63.61
	C.	-17.20	-27.39	-36.68	-42.63	-47.02	-53.31	-57.70	-63.85	-67.98	-71.22
-130	0.	9.75	20.41	29.83	35.63	39.96	45.75	49.94	55.29	58.73	61.25
	0.	-17.94	-28.73	-38.37	-44.68	-49.17	-55.63	-60.23	-66.27	-70.59	-73.74
-120	C.	8.12	18.87	27.96	33.69	37.74	43.52	47.43	52.75	56.30	58.96
	0.	-18.52	-30.06	-40.16	-46.48	-51.19	-57.75	-62.32	-68.55	-72.66	-75.88
-110	C.	6.62	17.24	26.24	31.76	35.84	41.41	45.44	50.65	54.16	56.55
	C.	-19.17	-31.18	-41.77	-48.45	-53.23	-60.05	-64.56	-70.58	-74.68	-77.44
-100	0.	4.85	15.50	24.42	30.03	33.89	39.60	43.36	48.63	52.03	54.89
	C.	-20.03	-32.56	-43.60	-50.45	-55.29	-61.72	-66.20	-72.02	-75.96	-78.80
-90	C.	1.57	13.06	22.23	27.90	31.99	37.73	41.71	47.03	50.70	53.17
	0.	-20.56	-34.11	-45.36	-52.02	-56.77	-63.24	-67.54	-73.25	-76.92	-79.91
-80	C.	-3.00	10.48	20.35	26.26	30.64	36.57	40.79	46.27	50.13	52.49
	C.	-20.30	-35.25	-46.52	-53.28	-57.96	-64.45	-68.59	-74.22	-77.64	-80.43
-70	C.	-9.55	7.82	18.86	25.44	30.12	36.34	40.75	46.42	50.35	52.85
	C.	-16.66	-35.49	-47.08	-53.97	-58.64	-65.12	-69.25	-74.83	-78.11	-80.74
-60	C.	0.	6.78	18.96	25.94	30.81	37.34	41.80	47.64	51.46	54.38
	0.	0.	-34.64	-46.79	-53.88	-58.67	-65.23	-69.45	-75.05	-78.33	-80.88
-50	C.	0.	9.34	21.18	28.11	32.95	39.69	44.03	50.01	53.56	56.24
	0.	0.	-32.31	-45.54	-52.90	-57.97	-64.88	-69.18	-74.96	-78.28	-80.87
-40	C.	0.	14.74	25.21	31.40	36.00	42.25	46.54	52.16	55.94	58.60
	C.	0.	-28.99	-42.91	-51.08	-56.55	-63.81	-68.42	-74.44	-77.97	-80.69
-30	C.	5.06	19.75	29.18	35.00	39.09	45.18	49.24	54.84	58.22	60.89
	C.	-6.07	-25.00	-34.33	-48.15	-54.34	-62.16	-67.20	-73.55	-77.38	-80.36
-20	C.	11.28	23.64	32.43	37.82	41.76	47.42	51.44	56.76	60.46	62.86
	0.	-5.22	-20.42	-35.00	-44.35	-51.05	-60.06	-65.59	-72.32	-76.54	-79.72
-10	C.	16.16	26.80	35.27	40.37	44.06	49.62	53.39	58.68	62.07	64.95
	0.	-3.90	-17.56	-30.67	-40.03	-47.03	-56.84	-63.13	-70.80	-75.46	-78.53

* REFER TO FIGURE 4 (RM 63 TMP-2)

*Table 8 (Cont.)

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	0. 0.	20.05 -2.94	29.37 -15.17	37.09 -27.05	42.04 -35.86	45.78 -42.87	51.10 -53.23	55.12 -60.27	60.31 -68.59	63.66 -73.66	66.15 -77.07
10	0. 0.	22.21 -2.41	30.97 -13.39	38.49 -24.53	43.33 -32.61	46.93 -39.30	-49.59 52.26	56.15 -56.74	61.33 -65.91	65.05 -71.40	67.27 -75.38
20	0. 0.	23.56 -2.62	31.75 -12.73	39.31 -23.03	44.16 -30.61	47.73 -36.70	-46.34 53.15	56.98 -53.44	62.20 -62.78	65.80 -68.71	68.28 -72.78
30	0. 0.	23.86 -3.67	31.84 -13.07	39.55 -22.69	44.55 -29.74	48.21 -35.32	-44.07 53.77	57.60 -50.67	62.90 -59.81	66.43 -65.67	69.15 -70.04
40	0. 0.	23.39 -5.33	31.56 -14.10	39.50 -23.08	44.72 -29.57	48.50 -34.67	-42.48 54.20	-48.45 58.05	63.44 -56.80	66.95 -62.44	69.87 -66.62
50	0. 0.	23.19 -6.71	31.43 -15.20	39.56 -23.60	44.93 -29.65	48.76 -34.31	-41.40 54.53	-46.72 58.40	63.87 -54.38	67.38 -59.62	70.27 -63.40
60	11.69 4.15	24.05 -7.73	31.91 -15.76	40.01 -23.87	45.24 -29.57	49.10 -33.87	-40.48 54.86	-45.33 58.72	64.24 -52.04	67.74 -56.77	70.57 -60.45
70	15.69 1.88	25.55 -8.17	32.86 -15.85	40.56 -23.72	45.65 -29.17	49.54 -33.24	-39.46 55.16	-43.85 59.04	64.57 -50.20	68.06 -54.47	70.84 -57.53
80	17.99 0.76	26.76 -8.23	33.85 -15.72	41.13 -23.39	46.10 -28.65	-32.56 50.01	-38.37 55.44	-42.49 59.37	-48.28 64.90	68.36 -52.17	71.08 -55.31
90	19.43 0.04	27.49 -8.35	34.50 -15.72	41.57 -23.18	46.48 -28.26	-32.04 50.32	-37.55 55.72	-41.48 59.71	-46.83 65.15	68.66 -50.60	71.31 -53.17
100	19.39 -0.40	27.53 -8.83	34.68 -15.99	41.80 -23.30	46.74 -28.21	-31.85 50.58	-37.11 55.99	-40.91 60.04	-45.96 65.37	-49.48 68.95	71.52 -51.75
110	18.23 -0.76	27.07 -9.49	34.49 -16.47	41.89 -23.70	46.94 -28.47	-31.97 50.81	-37.04 56.26	-40.72 60.30	-45.59 65.60	-48.76 69.23	71.71 -51.07
120	16.75 -0.68	26.45 -9.93	34.22 -16.89	41.95 -24.16	47.13 -28.87	-32.28 51.04	-37.27 56.54	-40.86 60.55	-45.62 65.81	-48.70 69.46	71.85 -50.95
130	15.34 0.26	25.92 -9.78	34.04 -17.04	42.04 -24.52	47.34 -29.30	-32.71 51.28	-37.73 56.79	-41.26 60.76	-46.00 65.98	-49.22 69.62	71.91 -51.31
140	12.64 3.07	25.45 -9.13	33.87 -16.97	42.11 -24.84	47.49 -29.83	-33.31 51.45	-38.47 56.97	-41.98 60.90	-46.77 66.05	69.64 -50.20	71.87 -52.18
150	0. 0.	24.67 -8.54	33.46 -17.03	41.97 -25.28	47.44 -30.46	-34.23 51.44	-39.63 56.98	-43.15 60.89	-48.05 65.98	69.47 -51.30	71.70 -53.71
160	0. 0.	23.13 -8.78	32.57 -17.68	41.47 -26.12	47.06 -31.47	-35.48 51.15	-40.92 56.72	-44.87 60.66	-49.98 65.72	69.08 -53.03	71.36 -55.60
170	0. 0.	21.16 -10.23	31.18 -19.18	40.54 -27.56	46.29 -33.02	-36.98 50.53	-42.58 56.16	-46.48 60.19	65.27 -51.66	68.41 -55.32	70.86 -57.62

• REFER TO FIGURE 4 (RM 63 IMP-2)

*Table 9. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 400 Kilometers

LONG (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)
-180	0. 0.	24.32 -3.81	38.69 -16.09	49.86 -25.93	-36.16 62.01	-48.52 -88.06	0. 0.
-170	0. 0.	22.43 -6.68	37.27 -18.95	48.81 -28.97	-39.42 61.21	-52.14 -87.65	0. 0.
-160	0. 0.	20.01 -9.88	34.54 -21.91	46.34 -32.07	-42.70 59.09	-55.83 -87.19	0. 0.
-150	0. 0.	17.32 -13.02	31.10 -25.08	42.72 -35.27	-46.09 55.60	-60.03 -86.68	0. 0.
-140	0. 0.	15.13 -16.57	27.64 -28.41	38.60 -38.75	-49.85 51.00	-65.51 -86.10	0. 0.
-130	0. 0.	12.90 -20.32	24.52 -32.04	34.64 -42.64	46.09 -54.29	-73.21 -85.39	0. 0.
-120	0. 0.	10.97 -24.13	21.73 -36.11	31.22 -47.13	41.73 -59.39	0. 0.	0. 0.
-110	0. 0.	9.07 -28.54	19.29 -40.89	28.34 -52.24	38.24 -64.74	55.44 68.94	0. 0.
-100	0. 0.	7.29 -34.01	17.17 -46.35	26.04 -57.51	35.71 -69.66	51.76 69.24	0. 0.
-90	-10.40 -20.93	5.98 -40.30	15.58 -51.82	24.45 -62.25	34.36 -73.66	51.59 66.91	0. 0.
-80	-7.86 -31.25	5.41 -46.17	14.84 -56.53	24.01 -66.07	34.63 -76.59	0. 0.	0. 0.
-70	-5.80 -38.54	5.95 -50.87	15.51 -60.21	25.24 -68.98	37.41 -78.65	0. 0.	0. 0.
-60	-3.52 -43.37	7.96 -54.28	17.99 -62.91	28.70 -71.15	43.22 -80.04	0. 0.	0. 0.
-50	-0.54 -46.33	11.39 -56.60	22.13 -64.88	33.98 -72.72	52.00 -81.10	0. 0.	0. 0.
-40	2.66 -47.79	15.53 -58.10	26.93 -66.21	39.77 -73.79	61.90 -81.78	0. 0.	0. 0.
-30	5.54 -48.07	19.22 -58.94	31.07 -67.03	44.82 -74.47	69.04 -82.20	0. 0.	0. 0.
-20	6.86 -47.12	21.67 -59.19	33.88 -67.42	48.58 -74.82	-82.40 72.71	0. 0.	0. 0.

* REFER TO FIGURE 5 (RM 63 TMP-2)

*Table 9 (Cont.)

LONG (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)
-10	6.15 -44.30	22.81 -58.88	35.36 -67.39	50.76 -74.85	74.48 -82.42	0. 0.	0. 0.
-0	-3.63 -6.06	22.90 -58.00	35.74 -66.95	51.54 -74.56	-82.25 75.17	0. 0.	0. 0.
10	0. 0.	22.09 -56.55	35.11 -66.07	50.77 -73.92	-81.86 75.04	0. 0.	0. 0.
20	0. 0.	20.41 -54.29	33.58 -64.63	48.65 -72.88	74.01 -81.21	0. 0.	0. 0.
30	0. 0.	17.63 -50.52	31.13 -62.35	45.22 -71.30	71.59 -80.18	0. 0.	0. 0.
40	0. 0.	14.46 -42.83	28.10 -58.96	41.24 -68.94	66.33 -78.75	0. 0.	0. 0.
50	0. 0.	10.69 -18.11	25.10 -53.26	37.28 -65.44	57.25 -76.56	0. 0.	0. 0.
60	0. 0.	2.13 -1.02	22.49 -41.42	33.99 -59.76	49.31 -73.10	0. 0.	0. 0.
70	0. 0.	0. 0.	20.55 -20.15	31.72 -48.78	44.43 -67.34	0. 0.	0. 0.
80	0. 0.	0. 0.	18.94 -9.42	30.26 -29.21	41.66 -56.32	0. 0.	0. 0.
90	0. 0.	0. 0.	17.81 -4.15	29.47 -19.22	40.08 -37.64	-78.52 -81.32	0. 0.
100	0. 0.	0. 0.	17.61 -2.29	29.39 -15.62	39.78 -28.37	-50.07 -85.85	0. 0.
110	0. 0.	0. 0.	18.68 -2.74	30.26 -14.70	40.83 -25.20	-38.92 -86.78	0. 0.
120	0. 0.	0. 0.	20.99 -4.16	32.32 -14.91	43.40 -24.36	-35.58 -87.53	0. 0.
130	0. 0.	0. 0.	24.47 -5.62	35.71 -15.56	47.46 -24.55	-34.93 -88.09	-58.30 -64.31
140	0. 0.	0. 0.	28.72 -6.99	39.95 -16.56	-25.50 52.29	-35.91 -88.46	-54.99 -70.22
150	0. 0.	16.56 6.35	33.03 -8.68	44.19 -18.08	-27.26 56.67	-38.09 -88.62	-57.94 -71.35
160	0. 0.	22.00 2.18	36.49 -10.81	47.51 -20.25	-29.73 59.71	-41.20 -88.58	-63.09 -70.71
170	0. 0.	24.41 -0.98	38.44 -13.30	49.42 -22.95	-32.87 61.54	-44.78 -88.38	0. 0.

* REFER TO FIGURE 5 (RM 63 TMP-2)

*Table 10. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 400 Kilometers

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	0.	17.18	28.31	38.31	44.61	48.89	-44.35	-48.25	64.07	67.30	70.08
	0.	-10.44	-20.15	-28.81	-34.48	-38.48	55.00	58.82	-53.69	-57.22	-60.16
-170	0.	15.11	26.24	36.46	42.81	47.28	-46.34	57.44	62.74	66.21	68.74
	0.	-12.00	-21.80	-30.72	-36.33	-40.55	53.42	-50.54	-56.04	-60.01	-62.55
-160	0.	12.88	24.29	34.60	40.96	45.56	-48.53	55.87	61.22	65.00	67.17
	0.	-13.44	-23.51	-32.49	-38.28	-42.48	51.65	-52.69	-58.49	-62.36	-65.49
-150	0.	11.12	22.43	32.55	38.98	43.46	49.84	53.91	59.49	62.85	65.57
	0.	-14.72	-25.20	-34.40	-40.34	-44.69	-50.77	-55.20	-61.03	-65.24	-68.19
-140	0.	9.47	20.87	30.81	36.92	41.38	47.48	51.66	57.13	60.83	63.38
	0.	-15.55	-26.46	-36.07	-42.11	-46.58	-52.92	-57.37	-63.54	-67.71	-70.99
-130	0.	7.63	19.41	29.07	35.16	39.42	45.43	49.56	55.09	58.46	61.08
	0.	-16.12	-27.71	-37.69	-44.08	-48.66	-55.30	-59.91	-66.00	-70.35	-73.44
-120	0.	6.16	17.80	27.28	33.12	37.28	43.13	47.12	52.50	56.11	58.74
	0.	-16.53	-28.97	-39.45	-45.97	-50.75	-57.35	-61.97	-68.21	-72.36	-75.62
-110	0.	4.70	16.25	25.62	31.25	35.44	41.08	45.19	50.46	53.93	56.40
	0.	-16.96	-30.26	-41.11	-47.86	-52.71	-59.58	-64.12	-70.30	-74.32	-77.15
-100	0.	2.25	14.46	23.66	29.42	33.40	39.19	43.04	48.38	51.85	54.69
	0.	-17.48	-31.53	-42.84	-49.91	-54.78	-61.31	-65.85	-71.69	-75.69	-78.47
-90	0.	-1.00	11.97	21.56	27.36	31.56	37.38	41.44	46.82	50.55	53.01
	0.	-17.70	-32.92	-44.61	-51.42	-56.26	-62.76	-67.13	-72.88	-76.62	-79.55
-80	0.	-6.92	9.36	19.68	25.78	30.26	36.25	40.54	46.07	49.99	52.33
	0.	-16.23	-34.00	-45.79	-52.61	-57.38	-63.91	-68.14	-73.80	-77.32	-80.21
-70	0.	0.	6.68	18.12	24.98	29.65	36.02	40.50	46.21	50.19	52.67
	0.	0.	-34.22	-46.30	-53.25	-58.02	-64.60	-68.76	-74.40	-77.78	-80.51
-60	0.	0.	5.67	18.19	25.44	30.39	36.97	41.50	47.38	51.26	54.14
	0.	0.	-33.19	-45.98	-53.13	-58.03	-64.74	-68.95	-74.64	-77.99	-80.65
-50	0.	0.	7.98	20.50	27.51	32.44	39.22	43.64	49.66	53.28	56.05
	0.	0.	-31.00	-44.70	-52.17	-57.33	-64.28	-68.67	-74.50	-77.92	-80.63
-40	0.	0.	13.23	24.40	30.85	35.54	41.84	46.21	51.87	55.72	58.33
	0.	0.	-27.58	-42.02	-50.41	-55.95	-63.22	-67.92	-73.98	-77.60	-80.45
-30	0.	0.	18.31	28.33	34.33	38.55	44.76	48.83	54.47	57.93	60.69
	0.	0.	-23.62	-38.42	-47.40	-53.62	-61.61	-66.72	-73.10	-77.02	-80.11
-20	0.	6.67	22.38	31.71	37.24	41.30	47.02	51.12	56.48	60.26	62.60
	0.	-0.67	-19.84	-34.16	-43.61	-50.45	-59.42	-65.15	-71.89	-76.19	-79.29

* REFER TO FIGURE 5 (RM 63 TMP-2)

*Table 10 (Cont.)

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-10	C. 0.	13.16 -1.10	25.79 -16.53	34.55 -30.02	39.87 -35.36	43.55 -46.44	49.19 -56.28	53.03 -62.57	58.37 -70.40	61.83 -75.12	64.65 -78.11
-0	C. 0.	17.38 -0.86	28.21 -14.16	36.45 -26.45	41.53 -35.35	45.39 -42.33	50.78 -52.67	54.79 -59.73	60.10 -68.06	63.39 -73.16	65.97 -76.67
10	C. 0.	20.48 -0.68	30.12 -12.50	37.81 -23.94	42.80 -32.14	46.53 -38.83	49.06 51.93	55.88 -56.24	61.10 -65.46	64.81 -70.96	67.07 -75.00
20	C. 0.	21.76 -1.06	30.89 -11.91	38.62 -22.51	43.62 -30.21	47.31 -36.31	45.93 52.80	56.70 -52.95	61.96 -62.27	65.62 -68.17	68.07 -72.29
30	C. 0.	22.13 -2.10	31.02 -12.27	38.88 -22.18	44.04 -29.30	47.80 -34.97	43.67 53.42	57.32 -50.29	62.66 -59.30	66.26 -65.25	68.94 -69.49
40	C. C.	21.84 -3.76	30.77 -13.25	38.87 -22.55	44.22 -29.12	48.10 -34.28	42.13 53.86	48.06 57.78	63.22 -56.39	66.78 -61.99	69.67 -66.19
50	C. C.	21.77 -5.47	30.69 -14.37	38.95 -23.05	44.44 -29.19	48.36 -33.90	41.07 54.20	46.38 58.15	63.66 -53.96	67.22 -59.17	70.16 -62.96
60	C. 0.	22.64 -6.46	31.17 -15.08	39.40 -23.30	44.84 -29.09	48.72 -33.47	40.18 54.55	45.05 58.47	64.03 -51.71	67.59 -56.44	70.47 -60.15
70	11.08 6.48	24.31 -6.94	32.09 -15.17	40.11 -23.17	45.30 -28.71	49.16 -32.85	39.10 54.92	43.53 58.80	49.95 64.38	67.92 -54.14	70.74 -57.23
80	15.38 3.74	25.69 -7.05	33.05 -15.07	40.67 -22.85	45.74 -28.20	49.63 -32.20	38.05 55.23	42.21 59.14	48.02 64.71	68.23 -51.94	70.99 -55.12
90	16.66 2.89	26.39 -7.20	33.68 -15.08	41.10 -22.65	46.11 -27.83	31.70 50.04	37.26 55.50	41.25 59.48	46.62 65.03	68.53 -50.44	71.22 -52.97
100	16.72 2.30	26.44 -7.63	33.85 -15.34	41.32 -22.76	46.37 -27.78	31.52 50.30	36.84 55.77	40.70 59.84	45.79 65.26	49.28 68.82	71.44 -51.61
110	15.78 2.03	26.01 -8.20	33.67 -15.77	41.41 -23.13	46.56 -28.01	31.63 50.52	36.77 56.04	40.52 60.13	45.44 65.48	48.58 69.09	71.62 -50.96
120	13.85 2.61	25.41 -8.54	33.40 -16.14	41.45 -23.55	46.74 -28.38	31.91 50.74	36.98 56.29	40.65 60.37	45.47 65.68	48.52 69.31	71.75 -50.84
130	11.00 4.44	24.82 -8.35	33.20 -16.26	41.53 -23.88	46.92 -28.79	32.32 50.95	37.42 56.53	41.04 60.57	45.84 65.83	49.03 69.45	71.80 -51.19
140	C. 0.	24.09 -7.70	33.00 -16.18	41.56 -24.17	47.04 -29.29	32.89 51.10	38.14 56.69	41.74 60.69	46.58 65.88	69.45 -50.08	71.75 -52.04
150	C. 0.	23.11 -7.10	32.56 -16.22	41.40 -24.70	46.97 -30.06	33.79 51.07	39.26 56.67	42.86 60.66	47.83 65.80	69.27 -51.14	71.56 -53.54
160	C. C.	21.64 -7.23	31.69 -16.81	40.89 -25.59	46.58 -31.03	35.14 50.77	40.63 56.40	44.54 60.41	49.71 65.54	68.86 -52.84	71.23 -55.47
170	C. 0.	19.72 -8.52	30.35 -18.21	39.98 -26.95	45.81 -32.51	36.58 50.15	42.24 55.84	46.22 59.92	65.08 -51.45	68.19 -55.17	70.72 -57.44

* REFER TO FIGURE 5 (RM 63 IMP-2)

*Table 11. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 500 Kilometers

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
-180	0.	0.	28.58	42.00	-29.65	-40.95	-56.30
	0.	0.	-7.89	-19.42	53.64	68.67	-82.23
-170	0.	0.	26.89	40.74	-32.79	-44.32	-60.58
	0.	0.	-10.80	-22.32	52.71	68.01	-81.29
-160	0.	0.	24.31	38.10	-35.93	-47.75	-66.31
	0.	0.	-13.73	-25.33	50.39	66.08	-79.22
-150	0.	0.	21.45	34.68	-46.92	-62.87	0.
	0.	0.	-16.88	-28.46	-39.20	-51.38	0.
-140	0.	0.	18.80	31.08	-42.74	-58.12	0.
	0.	0.	-20.34	-31.83	-42.79	-55.52	0.
-130	0.	0.	16.39	27.74	-38.57	-52.64	0.
	0.	0.	-23.85	-35.52	-46.83	-60.44	0.
-120	0.	0.	14.20	24.81	-34.88	-47.61	0.
	0.	0.	-27.69	-39.69	-51.50	-66.11	0.
-110	0.	-6.93	12.12	22.26	-31.92	-43.66	0.
	0.	-11.34	-32.18	-44.55	-56.67	-71.78	0.
-100	0.	-4.79	10.35	20.14	-29.57	-41.04	0.
	0.	-19.63	-37.56	-49.92	-61.78	-76.49	0.
-90	0.	-4.44	8.88	18.56	-28.14	-39.85	0.
	0.	-27.38	-43.48	-55.09	-66.19	-79.77	0.
-80	0.	-3.85	8.22	17.94	-27.93	-40.90	0.
	0.	-35.28	-48.92	-59.45	-69.66	-82.13	0.
-70	0.	-2.64	8.80	18.77	-29.51	-44.91	0.
	0.	-41.38	-53.22	-62.83	-72.32	-83.55	0.
-60	0.	-0.47	10.90	21.45	-33.45	-54.11	0.
	0.	-45.71	-56.40	-65.37	-74.22	-84.45	0.
-50	-20.24	2.47	14.43	25.77	-39.21	-85.04	0.
	-26.04	-48.39	-58.61	-67.18	-75.59	72.13	0.
-40	0.	6.00	18.66	30.68	-45.50	-85.47	0.
	0.	-49.98	-60.10	-68.43	-76.55	80.21	0.
-30	0.	9.13	22.42	34.90	-51.03	-85.72	0.
	0.	-50.39	-60.89	-69.21	-77.15	82.56	0.
-20	0.	11.06	24.99	37.92	-55.05	-85.85	0.
	0.	-49.92	-61.15	-69.59	-77.44	83.65	0.
-10	0.	11.44	26.30	39.54	-57.61	-85.89	0.
	0.	-48.14	-60.93	-69.56	-77.45	84.20	0.

* REFER TO FIGURE 6 (RM 63 TMP-2)

*Table 11 (Cont.)

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
-0	0. 0.	10.26 -45.17	26.58 -60.23	40.01 -69.14	58.55 -77.18	84.44 -85.83	0. 0.
10	0. 0.	5.37 -7.34	25.98 -58.82	39.46 -68.28	57.99 -76.60	84.45 -85.59	0. 0.
20	0. 0.	0. 0.	24.50 -56.69	37.91 -66.90	55.84 -75.65	-85.00 84.22	0. 0.
30	0. 0.	0. 0.	22.10 -53.37	35.39 -64.86	52.26 -74.22	83.68 -84.39	0. 0.
40	0. 0.	0. 0.	19.21 -47.60	32.34 -61.70	47.64 -72.13	82.59 -83.44	0. 0.
50	0. 0.	0. 0.	16.10 -33.93	29.23 -56.74	42.98 -68.99	80.23 -81.88	0. 0.
60	0. 0.	0. 0.	12.71 -13.87	26.65 -47.61	39.09 -64.09	68.60 -79.21	0. 0.
70	0. 0.	0. 0.	7.01 -0.49	24.76 -28.87	36.39 -55.47	54.22 -74.64	0. 0.
80	0. 0.	0. 0.	0. 0.	23.40 -15.69	34.61 -38.50	49.00 -66.22	0. 0.
90	0. 0.	0. 0.	0. 0.	22.61 -9.83	33.71 -25.29	46.63 -49.29	0. 0.
100	0. 0.	0. 0.	0. 0.	22.51 -7.56	33.58 -20.37	45.96 -35.32	0. 0.
110	0. 0.	0. 0.	0. 0.	23.35 -7.42	34.45 -18.75	47.12 -30.45	-52.09 -74.22
120	0. 0.	0. 0.	0. 0.	25.41 -8.18	36.61 -18.56	49.87 -28.90	-43.76 -79.45
130	0. 0.	0. 0.	0. 0.	28.53 -9.25	39.99 -19.03	-28.83 54.50	-42.00 -81.30
140	0. 0.	0. 0.	17.28 3.43	32.56 -10.47	44.23 -19.99	-29.71 59.64	-42.69 -82.23
150	0. 0.	0. 0.	22.85 0.00	36.63 -11.99	48.33 -21.57	-31.61 64.02	-44.87 -82.71
160	0. 0.	0. 0.	26.68 -2.44	39.88 -14.07	-23.81 51.44	-34.27 66.91	-48.38 -82.86
170	0. 0.	0. 0.	28.60 -5.25	41.72 -16.61	-26.61 53.23	-37.55 68.36	-52.29 -82.71

* REFER TO FIGURE 6 (RM 63 TMP-2)

*Table 12. Constant Magnetic Shell Paramter, L (Earth Radii), at Altitude 500 Kilometers

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	0.	15.54	27.33	37.63	44.00	48.39	-43.95	-47.93	63.78	67.09	69.90
	0.	-8.52	-19.13	-28.13	-33.92	-38.02	54.55	58.46	-53.43	-57.02	-60.02
-170	0.	13.09	25.36	35.84	42.25	46.82	-46.02	57.11	62.47	66.02	68.51
	0.	-10.37	-20.90	-30.16	-35.86	-40.18	53.01	-50.28	-55.83	-59.75	-62.35
-160	0.	11.09	23.26	33.87	40.47	45.15	-48.15	55.58	60.99	64.70	66.97
	0.	-11.54	-22.52	-31.85	-37.75	-42.04	51.29	-52.38	-58.21	-62.14	-65.31
-150	0.	9.22	21.48	31.89	38.39	42.97	49.39	53.54	59.16	62.60	65.41
	0.	-12.51	-24.15	-33.69	-39.85	-44.18	-50.45	-56.90	-60.79	-65.04	-67.95
-140	0.	7.20	19.98	30.21	36.40	40.95	47.10	51.35	56.87	60.64	63.15
	0.	-13.32	-25.55	-35.48	-41.60	-46.16	-52.54	-57.05	-63.24	-67.45	-70.77
-130	0.	5.58	18.29	28.34	34.60	38.91	45.11	49.18	54.83	58.23	60.91
	0.	-13.90	-26.72	-37.02	-43.51	-48.17	-54.96	-59.52	-65.74	-70.12	-73.15
-120	0.	3.74	16.77	26.61	32.56	36.83	42.75	46.82	52.25	55.94	58.53
	0.	-14.27	-27.88	-38.71	-45.48	-50.33	-56.95	-61.62	-67.88	-72.07	-75.41
-110	0.	1.80	15.30	25.03	30.76	35.05	40.77	44.92	50.27	53.70	56.25
	0.	-14.59	-29.16	-40.48	-47.28	-52.21	-59.11	-63.71	-70.04	-73.97	-76.87
-100	0.	-0.43	13.25	22.93	28.81	32.92	38.79	42.73	48.13	51.67	54.49
	0.	-14.84	-30.53	-42.11	-49.24	-54.19	-60.91	-65.51	-71.38	-75.45	-78.16
-90	0.	-4.72	10.92	20.92	26.84	31.15	37.04	41.18	46.62	50.41	52.85
	0.	-13.74	-31.77	-43.77	-50.85	-55.76	-62.30	-66.75	-72.53	-76.34	-79.21
-80	0.	0.	8.08	18.90	25.31	29.84	35.95	40.30	45.88	49.76	52.18
	0.	0.	-32.71	-45.09	-51.97	-56.83	-63.40	-67.71	-73.42	-77.02	-80.00
-70	0.	0.	5.58	17.41	24.37	29.15	35.71	40.25	46.01	50.04	52.49
	0.	0.	-32.82	-45.54	-52.56	-57.43	-64.05	-68.31	-73.99	-77.46	-80.30
-60	0.	0.	4.44	17.45	24.94	29.99	36.61	41.21	47.13	51.07	53.90
	0.	0.	-31.81	-45.22	-52.43	-57.42	-64.17	-68.47	-74.21	-77.65	-80.42
-50	0.	0.	6.64	19.79	26.92	31.94	38.78	43.27	49.32	53.02	55.86
	0.	0.	-29.65	-43.74	-51.49	-56.73	-63.70	-68.18	-74.06	-77.58	-80.40
-40	0.	0.	11.81	23.54	30.31	35.10	41.44	45.89	51.59	55.50	58.07
	0.	0.	-26.19	-41.18	-49.71	-55.39	-62.67	-67.44	-73.55	-77.26	-80.22
-30	0.	0.	16.93	27.51	33.67	38.01	44.29	48.43	54.12	57.65	60.49
	0.	0.	-22.25	-37.54	-46.68	-52.93	-61.10	-66.27	-72.68	-76.68	-79.78
-20	0.	0.	21.19	31.00	36.67	40.84	46.64	50.81	56.22	60.06	62.36
	0.	0.	-18.53	-33.33	-42.89	-49.85	-58.79	-64.62	-71.48	-75.86	-78.87
-10	0.	6.95	24.71	33.74	39.22	43.07	48.77	52.68	58.06	61.59	64.36
	0.	4.18	-15.51	-29.27	-38.70	-45.87	-55.76	-62.04	-70.02	-74.69	-77.71

* REFER TO FIGURE 6 (RM 63 TMP-2)

*Table 12 (Cont.)

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	C. 0.	14.69 2.27	27.11 -13.11	35.83 -25.84	41.04 -34.82	45.01 -41.81	50.46 -52.13	54.41 -59.13	59.83 -67.56	63.13 -72.70	65.78 -76.29
10	C. C.	17.81 1.74	28.97 -11.61	37.15 -23.35	42.29 -31.68	46.13 -38.36	-48.56 51.59	55.61 -55.78	60.88 -65.04	64.53 -70.55	66.87 -74.47
20	C. C.	20.04 0.83	30.05 -11.09	37.95 -22.00	43.10 -29.78	46.91 -35.93	-45.54 52.46	56.43 -52.49	61.74 -61.80	65.45 -67.68	67.86 -71.83
30	C. C.	20.48 -0.51	30.20 -11.47	38.23 -21.67	43.52 -28.86	47.40 -34.56	-43.27 53.08	-49.91 57.05	62.43 -58.80	66.09 -64.81	68.73 -68.96
40	C. C.	20.34 -2.03	30.00 -12.41	38.25 -22.03	43.72 -28.68	47.70 -33.88	-41.78 53.52	-47.67 57.52	62.99 -56.01	66.62 -61.58	69.47 -65.78
50	C. C.	20.38 -3.83	29.94 -13.47	38.35 -22.51	43.95 -28.73	47.98 -33.50	-40.75 53.88	-46.06 57.89	63.45 -53.57	67.06 -58.75	70.06 -62.55
60	C. C.	21.25 -5.22	30.44 -14.18	38.81 -22.75	44.36 -28.62	48.34 -33.06	-39.85 54.23	-44.70 58.23	63.84 -51.40	67.44 -56.13	70.37 -59.81
70	C. C.	22.85 -5.73	31.35 -14.33	39.53 -22.61	44.92 -28.25	48.78 -32.47	-38.75 54.62	-43.21 58.56	-49.61 64.19	67.78 -53.82	70.65 -56.95
80	C. C.	24.47 -5.90	32.27 -14.22	40.21 -22.32	45.38 -27.76	49.25 -31.84	-37.74 55.01	-41.95 58.91	-47.76 64.53	68.10 -51.71	70.90 -54.89
90	12.14 7.34	25.32 -6.07	32.88 -14.23	40.63 -22.13	45.75 -27.41	49.68 -31.37	-36.97 55.29	-41.02 59.25	-46.42 64.88	68.40 -50.28	71.13 -52.77
100	12.64 5.95	25.38 -6.47	33.04 -14.57	40.85 -22.23	46.00 -27.35	-31.19 50.02	-36.57 55.56	-40.49 59.60	-45.63 65.14	-49.07 68.69	71.35 -51.47
110	11.12 6.82	24.97 -6.95	32.87 -15.09	40.93 -22.57	46.18 -27.57	-31.28 50.23	-36.50 55.81	-40.32 59.95	-45.29 65.35	-48.41 68.94	71.52 -50.84
120	C. C.	24.11 -7.20	32.59 -15.42	40.97 -22.96	46.35 -27.91	-31.56 50.44	-36.70 56.06	-40.44 60.19	-45.32 65.54	-48.35 69.15	71.65 -50.74
130	C. C.	23.33 -6.96	32.37 -15.51	41.02 -23.26	46.51 -28.29	-31.94 50.63	-37.12 56.27	-40.82 60.38	-45.68 65.68	-48.84 69.28	71.69 -51.08
140	C. C.	22.58 -6.32	32.14 -15.41	41.03 -23.53	46.60 -28.77	-32.49 50.75	-37.81 56.40	-41.50 60.47	-46.40 65.72	-49.93 69.26	71.63 -51.91
150	C. C.	21.59 -5.70	31.70 -15.43	40.85 -24.03	46.51 -29.54	-33.35 50.70	-38.90 56.37	-42.59 60.43	-47.61 65.63	69.07 -51.00	71.43 -53.37
160	C. C.	20.18 -5.73	30.84 -15.97	40.33 -25.06	46.11 -30.60	-34.71 50.39	-40.35 56.09	-44.21 60.18	-49.44 65.36	68.64 -52.64	71.09 -55.35
170	C. C.	17.79 -6.76	29.39 -17.27	39.24 -26.36	45.35 -32.02	49.68 -36.18	-41.91 55.53	-45.96 59.55	64.84 -51.24	67.98 -55.02	70.58 -57.27

• REFER TO FIGURE 6 (RM 63 IMP-2)

*Table 13. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 600 Kilometers

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
-180	0.	0.	32.27	45.34	-33.64	-46.45	0.
	0.	0.	-11.49	-22.76	57.89	-89.41	0.
-170	0.	0.	30.78	44.18	-36.84	-49.94	0.
	0.	0.	-14.35	-25.72	57.05	-88.96	0.
-160	0.	0.	28.14	41.70	-40.02	-53.72	0.
	0.	0.	-17.24	-28.74	54.87	-88.48	0.
-150	0.	0.	25.21	38.30	-43.45	-57.93	0.
	0.	0.	-20.42	-31.93	51.59	-87.99	0.
-140	0.	1.85	22.25	34.59	47.38	-63.00	0.
	0.	-5.04	-23.70	-35.33	-47.19	-87.48	0.
-130	0.	2.26	19.65	31.08	43.00	64.77	0.
	0.	-10.21	-27.24	-39.10	-51.46	-69.26	0.
	0.	0.	0.	0.	0.	77.23	0.
	0.	0.	0.	0.	0.	-86.91	0.
-120	0.	1.75	17.21	27.99	39.05	57.10	0.
	0.	-14.80	-31.16	-43.41	-56.37	-77.23	0.
	0.	0.	0.	0.	0.	78.44	0.
	0.	0.	0.	0.	0.	-86.18	0.
-110	0.	0.95	15.11	25.35	35.88	51.73	0.
	0.	-19.48	-35.71	-48.34	-61.62	-84.95	0.
	0.	0.	0.	0.	0.	78.47	0.
	0.	0.	0.	0.	0.	-85.02	0.
-100	0.	0.16	13.16	23.20	33.55	48.67	0.
	0.	-25.19	-41.03	-53.58	-66.54	77.75	0.
-90	0.	-0.50	11.72	21.70	32.24	48.11	0.
	0.	-31.78	-46.63	-58.47	-70.60	76.06	0.
-80	0.	-0.49	11.09	21.20	32.33	51.01	0.
	0.	-38.51	-51.66	-62.51	-73.74	72.37	0.
-70	0.	0.42	11.70	22.23	34.39	0.	0.
	0.	-44.00	-55.67	-65.64	-76.02	0.	0.
-60	-17.04	2.36	13.88	25.11	39.01	0.	0.
	-28.15	-47.86	-58.60	-67.97	-77.67	0.	0.
-50	-12.69	5.47	17.54	29.66	45.57	0.	0.
	-33.10	-50.48	-60.70	-69.64	-78.80	0.	0.
-40	-10.61	9.10	21.85	34.73	52.73	-89.91	0.
	-33.68	-51.87	-62.06	-70.80	-79.55	0.	0.
-30	-13.07	12.39	25.66	39.13	58.73	-89.85	0.
	-28.16	-52.40	-62.85	-71.52	-80.02	0.	0.
-20	0.	14.67	28.31	42.31	62.91	-89.94	0.
	0.	-52.10	-63.14	-71.85	-80.25	0.	0.
-10	0.	15.57	29.74	44.13	65.25	0.	0.
	0.	-51.03	-62.94	-71.82	-80.25	0.	0.

* REFER TO FIGURE 7 (RM 63 TMP-2)

*Table 13 (Cont.)

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
-0	0. 0.	15.29 -48.89	30.15 -62.26	44.72 -71.43	66.22 -80.01	0. 0.	0. 0.
10	0. 0.	13.57 -45.25	29.66 -61.06	44.20 -70.64	65.91 -79.52	0. 0.	0. 0.
20	0. 0.	10.44 -13.67	28.28 -59.12	42.60 -69.35	64.26 -78.73	0. 0.	0. 0.
30	0. 0.	0.63 -0.29	26.10 -56.13	39.94 -67.41	60.93 -77.52	0. 0.	0. 0.
40	0. 0.	0. 0.	23.31 -51.29	36.80 -64.58	55.83 -75.69	0. 0.	0. 0.
50	0. 0.	0. 0.	20.50 -41.94	33.54 -60.21	50.00 -73.00	0. 0.	0. 0.
60	0. 0.	0. 0.	17.76 -23.12	30.81 -52.69	45.11 -68.79	0. 0.	0. 0.
70	0. 0.	0. 0.	15.35 -9.94	28.81 -37.74	41.74 -61.75	0. 0.	0. 0.
80	0. 0.	0. 0.	12.12 -0.89	27.50 -22.08	39.46 -48.24	-81.26 -85.68	0. 0.
90	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	26.77 -14.97 0. 0.	38.32 -32.39 0. 0.	59.74 67.09 -65.41 -86.94	0. 0. 0. 0.
100	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	26.69 -12.13 0. 0.	38.12 -25.49 0. 0.	-45.16 56.74 72.08 -87.91	0. 0. 0. 0.
110	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	27.47 -11.50 0. 0.	39.01 -23.03 0. 0.	-37.00 58.08 73.44 -88.70	0. 0. 0. 0.
120	0. 0. 0. 0.	0. 0. 0. 0.	13.58 3.43 0. 0.	29.41 -11.86 0. 0.	41.29 -22.40 0. 0.	-34.21 63.59 72.51 -89.35	0. 0. 0. 0.
130	0. 0.	0. 0.	18.17 0.25	32.48 -12.63	44.77 -22.67	-33.74 -89.82	-55.10 -67.19
140	0. 0.	0. 0.	22.83 -1.79	36.36 -13.71	49.02 -23.59	-34.56 0.	-53.94 -71.39
150	0. 0.	0. 0.	27.18 -3.94	40.22 -15.26	-25.20 52.98	-36.59 0.	-56.27 -72.53
160	0. 0.	0. 0.	30.54 -6.22	43.27 -17.32	-27.59 55.84	-39.43 0.	-60.41 -72.06
170	0. 0.	0. 0.	32.24 -8.76	45.03 -19.91	-30.47 57.51	-42.90 -89.79	0. 0.

• REFER TO FIGURE 7 (RM 63 TMP-2)

*Table 14. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 600 Kilometers

LONG (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	13.33 -6.43	26.38 -18.08	36.96 -27.48	43.41 -33.37	47.90 -37.58	-43.57 54.12	-47.62 58.12	63.49 -53.17	66.88 -56.82	69.66 -59.80
-170	11.04 -7.99	24.35 -20.04	35.24 -29.48	41.72 -35.40	46.37 -39.73	-45.71 52.61	56.79 -50.03	62.21 -55.61	65.83 -59.49	68.29 -62.16
-160	8.87 -9.47	22.25 -21.55	33.16 -31.23	40.00 -37.22	44.66 -41.61	-47.77 50.94	55.30 -52.08	60.76 -57.95	64.41 -61.92	66.78 -65.14
-150	6.71 -10.39	20.55 -23.06	31.25 -33.00	37.82 -39.26	42.48 -43.69	48.95 -50.14	53.18 -54.54	58.85 -60.57	62.36 -64.78	65.24 -67.72
-140	4.97 -10.84	18.83 -24.54	29.51 -34.86	35.91 -41.11	40.53 -45.75	46.73 -52.17	51.05 -56.74	56.62 -62.95	60.45 -67.20	62.92 -70.55
-130	2.46 -11.02	17.21 -25.76	27.64 -36.38	33.99 -42.95	38.40 -47.70	44.72 -54.52	48.82 -59.14	54.51 -65.49	57.99 -69.85	60.75 -72.88
-120	0.59 -10.98	15.78 -26.82	25.97 -38.00	32.02 -45.00	36.39 -49.89	42.38 -56.57	46.53 -61.29	52.01 -67.56	55.76 -71.80	58.32 -75.15
-110	-2.27 -10.70	14.14 -28.00	24.24 -39.82	30.29 -46.73	34.54 -51.73	40.45 -58.65	44.56 -63.31	50.08 -69.67	53.48 -73.64	56.10 -76.61
-100	0. 0.	12.10 -29.39	22.22 -41.41	28.23 -48.60	32.46 -53.62	38.41 -60.53	42.43 -65.19	47.90 -71.09	51.50 -75.21	54.29 -77.86
-90	0. 0.	9.87 -30.66	20.30 -42.96	26.33 -50.30	30.74 -55.29	36.70 -61.87	40.92 -66.38	46.42 -72.20	50.27 -76.08	52.69 -78.88
-80	0. 0.	6.86 -31.46	18.15 -44.22	24.80 -51.36	29.33 -56.31	35.64 -62.91	40.07 -67.30	45.69 -73.06	49.54 -76.73	52.02 -79.65
-70	0. 0.	4.30 -31.48	16.71 -44.77	23.77 -51.90	28.65 -56.87	35.41 -63.53	40.01 -67.87	45.80 -73.60	49.83 -77.16	52.32 -80.07
-60	0. 0.	2.97 -30.47	16.72 -44.33	24.29 -51.76	29.44 -56.84	36.26 -63.63	40.92 -68.02	46.88 -73.81	50.88 -77.34	53.68 -80.21
-50	0. 0.	5.33 -27.98	18.93 -42.82	26.35 -50.84	31.46 -56.16	38.34 -63.16	42.91 -67.73	49.00 -73.65	52.76 -77.26	55.68 -80.18
-40	0. 0.	10.45 -24.78	22.70 -40.36	29.72 -48.92	34.53 -54.79	41.06 -62.14	45.58 -66.99	51.32 -73.13	55.30 -76.94	57.81 -80.00
-30	0. 0.	15.61 -20.89	26.73 -36.69	33.03 -46.00	37.49 -52.28	43.82 -60.62	48.05 -65.84	53.78 -72.27	57.38 -76.36	60.30 -79.38
-20	0. 0.	20.05 -17.22	30.33 -32.52	36.12 -42.19	40.40 -49.15	46.27 -58.19	50.51 -64.04	55.96 -71.10	59.77 -75.55	62.12 -78.48
-10	0. 0.	23.32 -14.34	32.95 -28.52	38.60 -38.06	42.58 -45.32	48.35 -55.27	52.34 -61.54	57.76 -69.50	61.36 -74.21	64.09 -77.33

* REFER TO FIGURE 7 (RM 63 TMP-2)

*Table 14 (Cont.)

LONG. (DEG.)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
0	0. 0.	26.04 -12.05	35.22 -25.24	40.56 -34.25	44.49 -41.30	50.16 -51.61	54.05 -58.57	59.50 -67.09	62.87 -72.26	65.60 -75.93
10	14.81 4.65	27.81 10.70	36.51 -22.76	41.78 -31.22	45.73 -37.90	-48.07 51.27	55.35 -55.34	60.66 -64.50	64.26 -70.17	66.68 -73.97
20	16.97 3.46	28.88 -10.25	37.29 -21.47	42.59 -29.31	46.51 -35.55	-45.16 52.12	56.16 -52.04	61.51 -61.35	65.29 -67.21	67.67 -71.40
30	17.95 1.87	29.13 10.65	37.60 -21.16	43.01 -28.41	47.00 -34.16	-42.89 52.75	-49.47 56.78	62.21 -58.34	65.92 -64.29	68.53 -68.46
40	18.10 0.30	28.93 11.57	37.64 -21.50	43.23 -28.23	47.31 -33.48	-41.43 53.20	-47.31 57.26	62.77 -55.65	66.45 -61.19	69.28 -65.41
50	18.39 -1.95	28.93 -12.59	37.76 -21.97	43.47 -28.27	47.60 -33.09	-40.43 53.56	-45.74 57.64	63.24 -53.19	66.90 -58.35	69.91 -62.16
60	19.83 -3.43	29.61 -13.27	38.22 -22.20	43.88 -28.16	47.96 -32.67	-39.47 53.92	-44.34 57.98	63.63 -51.11	67.29 -55.84	70.27 -59.42
70	21.41 4.30	30.60 -13.44	38.93 -22.07	44.45 -27.80	48.41 -32.09	-38.40 54.31	-42.90 58.33	-49.29 64.00	67.64 -53.51	70.55 -56.68
80	22.95 4.64	31.50 -13.37	39.68 -21.79	45.03 -27.33	48.88 -31.49	-37.43 54.72	-41.69 58.68	-47.51 64.35	67.96 -51.49	70.81 -54.62
90	23.90 -4.94	32.09 -13.38	40.18 -21.62	45.39 -26.99	49.30 -31.04	-36.69 55.08	-40.80 59.02	-46.23 64.69	68.26 -50.13	71.04 -52.58
100	24.02 -5.32	32.25 -13.69	40.39 -21.71	45.64 -26.93	49.64 -30.86	-36.30 55.34	-40.29 59.36	-45.46 65.01	-48.88 68.55	71.26 -51.33
110	23.46 -5.73	32.08 -14.19	40.47 -22.02	45.82 -27.13	49.92 -30.95	-36.23 55.59	-40.13 59.70	-45.14 65.23	-48.23 68.80	71.43 -50.73
120	22.65 -5.91	31.80 -14.61	40.49 -22.38	45.96 -27.45	-31.20 50.14	-36.42 55.82	-40.24 60.01	-45.17 65.41	-48.18 69.00	71.54 -50.64
130	21.87 -5.63	31.57 -14.70	40.52 -22.65	46.10 -27.81	-31.57 50.31	-36.83 56.02	-40.61 60.19	-45.52 65.53	-48.66 69.11	71.58 -50.97
140	21.10 -4.98	31.31 -14.54	40.51 -22.91	46.17 -28.26	-32.10 50.42	-37.50 56.13	-41.26 60.27	-46.22 65.56	-49.72 69.08	71.51 -51.78
150	20.11 -3.97	30.85 -14.54	40.31 -23.38	46.06 -29.00	-32.92 50.35	-38.55 56.08	-42.31 60.21	-47.40 65.46	68.87 -50.85	71.31 -53.20
160	18.10 -3.83	30.01 -15.15	39.71 -24.38	45.65 -30.18	-34.23 50.03	-40.08 55.78	-43.89 59.93	-49.18 65.18	68.44 -52.46	70.95 -55.23
170	15.89 -5.06	28.33 -16.35	38.52 -25.78	44.87 -31.55	49.16 -35.80	-41.59 55.22	-45.70 59.19	64.54 -51.04	67.77 -54.79	70.45 -57.10

• REFER TO FIGURE 7 (RM 63 IMP-2)

*Table 15. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 700 Kilometers

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)
-180	0.	15.80	35.72	48.77	-37.95	-53.26
	0.	2.61	-14.85	-26.18	62.95	-84.67
-170	0.	14.60	34.31	47.73	-41.23	-57.35
	0.	-0.93	-17.63	-29.19	62.20	-84.01
-160	0.	12.59	31.75	45.40	-44.55	-62.08
	0.	-4.41	-20.61	-32.28	60.18	-82.80
-150	0.	11.01	28.68	42.07	-48.16	-68.71
	0.	-7.85	-23.69	-35.50	57.14	-80.52
-140	0.	9.52	25.61	38.28	52.91	0.
	0.	-11.68	-27.00	-38.98	-52.17	0.
-130	0.	7.88	22.74	34.58	48.25	0.
	0.	-15.65	-30.58	-42.89	-56.81	0.
-120	0.	6.44	20.23	31.34	43.95	0.
	0.	-19.63	-34.55	-47.34	-62.07	0.
-110	0.	5.13	17.93	28.60	40.50	0.
	0.	-23.97	-39.16	-52.34	-67.45	0.
-100	0.	3.67	16.01	26.44	38.16	0.
	0.	-29.32	-44.42	-57.45	-72.19	0.
-90	0.	2.69	14.57	24.97	37.00	0.
	0.	-35.52	-49.77	-62.05	-75.82	0.
-80	0.	2.44	13.95	24.64	37.53	0.
	0.	-41.53	-54.45	-65.78	-78.48	0.
-70	-16.79	3.20	14.65	25.93	40.32	0.
	-25.44	-46.47	-58.13	-68.64	-80.25	0.
-60	-11.26	5.23	16.96	29.14	46.17	0.
	-33.30	-50.12	-60.89	-70.76	-81.56	0.
-50	-8.07	8.32	20.73	33.97	54.33	0.
	-36.82	-52.43	-62.84	-72.29	-82.42	0.
-40	-5.35	12.08	25.11	39.24	62.83	0.
	-37.68	-53.88	-64.16	-73.33	-82.97	0.
-30	-4.14	15.54	28.98	43.82	68.69	0.
	-35.78	-54.53	-64.96	-73.97	-83.30	0.
-20	-7.56	17.88	31.72	47.20	83.45	0.
	-25.41	-54.40	-65.25	-74.26	71.97	0.
-10	0.	19.08	33.26	49.20	73.66	0.
	0.	-53.49	-65.10	-74.23	-83.44	0.

* REFER TO FIGURE 8 (RM 63 TMP-2)

*Table 15 (Cont.)

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)
-0	0. 0.	19.19 -51.84	33.76 -64.46	49.92 -73.87	74.35 -83.25	0. 0.
10	0. 0.	18.27 -49.24	33.35 -63.27	49.46 -73.13	74.26 -82.88	0. 0.
20	0. 0.	16.39 -44.73	32.04 -61.48	47.83 -71.95	73.37 -82.26	0. 0.
30	0. 0.	13.41 -31.01	29.90 -58.76	45.02 -70.19	71.33 -81.30	0. 0.
40	0. 0.	9.70 -12.43	27.21 -54.57	41.69 -67.59	67.39 -79.80	0. 0.
50	0. 0.	0.11 -0.09	24.45 -47.14	38.19 -63.68	60.68 -77.69	0. 0.
60	0. 0.	0. 0.	21.98 -32.15	35.15 -57.35	53.64 -74.18	0. 0.
70	0. 0.	0. 0.	20.08 -16.80	32.99 -45.66	48.54 -68.42	0. 0.
80	0. 0.	0. 0.	18.30 -7.99	31.56 -29.04	45.30 -57.82	0. 0.
90	0. 0.	0. 0.	17.09 -3.02	30.77 -20.16	43.73 -41.04	0. 0.
100	0. 0.	0. 0.	16.77 -1.17	30.69 -16.53	43.38 -31.38	0. 0.
110	0. 0.	0. 0.	17.68 -1.40	31.48 -15.39	44.30 -27.72	-46.57 -80.56
120	0. 0.	0. 0.	20.07 -2.61	33.39 -15.42	46.82 -26.53	-41.16 -82.79
130	0. 0.	0. 0.	23.13 -4.18	36.46 -15.99	-26.57 50.48	-39.77 -83.96
140	0. 0.	0. 0.	27.06 -5.74	40.22 -16.98	-27.48 54.72	-40.50 -84.62
150	0. 0.	0. 0.	30.96 -7.43	43.93 -18.50	-29.16 58.55	-42.68 -84.97
160	0. 0.	0. 0.	33.97 -9.62	46.82 -20.63	-31.66 61.17	-45.72 -85.07
170	0. 0.	15.24 6.59	35.64 -12.07	48.46 -23.26	-34.65 62.63	-49.35 -85.00

* REFER TO FIGURE 8 (RM 63 TMP-2)

*Table 16. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 700 Kilometers

LONG (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	10.82 -3.86	25.45 -17.05	36.32 -26.84	42.85 -32.84	47.42 -37.15	-43.20 53.70	-47.33 57.78	63.22 -52.92	66.69 -56.63	69.43 -59.58
-170	8.18 -5.47	23.25 -18.89	34.55 -28.75	41.20 -34.95	45.94 -39.23	-45.40 52.23	-49.69 56.48	61.95 -55.41	65.65 -59.25	68.08 -61.98
-160	5.96 -6.30	21.26 -20.61	32.46 -30.63	39.38 -36.72	44.13 -41.20	-47.41 50.60	55.03 -51.78	60.53 -57.69	64.14 -61.71	66.59 -64.97
-150	2.67 -6.76	19.53 -22.00	30.63 -32.32	37.27 -38.68	42.02 -43.21	48.53 -49.78	52.83 -54.18	58.54 -60.35	62.13 -64.50	65.09 -67.50
-140	0.82 -6.61	17.70 -23.38	28.76 -34.11	35.42 -40.62	40.13 -45.35	46.37 -51.82	50.77 -56.43	56.37 -62.67	60.27 -66.95	62.71 -70.35
-130	-4.02 -5.50	16.16 -24.76	26.95 -35.75	33.40 -42.40	37.92 -47.23	44.29 -54.10	48.47 -58.77	54.21 -65.24	57.76 -69.53	60.60 -72.61
-120	C. 0.	14.74 -25.79	25.36 -37.30	31.50 -44.38	35.97 -49.35	42.02 -56.20	46.24 -60.97	51.77 -67.26	55.58 -71.53	58.12 -74.91
-110	0. C.	12.89 -26.86	23.47 -39.03	29.76 -46.19	34.02 -51.26	40.15 -58.21	44.21 -62.92	49.84 -69.30	53.26 -73.32	55.95 -76.35
-100	0. C.	10.99 -28.12	21.53 -40.72	27.66 -47.97	32.01 -53.08	38.03 -60.17	42.14 -64.83	47.66 -70.80	51.33 -74.96	54.10 -77.57
-90	0. 0.	8.47 -29.42	19.58 -42.19	25.83 -49.69	30.35 -54.78	36.38 -61.45	40.67 -66.03	46.22 -71.88	50.13 -75.82	52.52 -78.56
-80	C. C.	5.67 -30.25	17.42 -43.36	24.19 -50.77	28.84 -55.80	35.35 -62.45	39.76 -66.91	45.51 -72.71	49.32 -76.46	51.87 -79.31
-70	C. C.	2.82 -30.19	16.03 -43.85	23.19 -51.28	28.17 -56.33	35.11 -63.03	39.66 -67.45	45.61 -73.23	49.59 -76.87	52.15 -79.81
-60	0. C.	1.54 -28.84	16.02 -43.41	23.67 -51.12	28.92 -56.28	35.92 -63.12	40.64 -67.59	46.64 -73.42	50.69 -77.03	53.45 -80.01
-50	0. 0.	3.62 -26.37	18.10 -41.95	25.80 -50.22	30.99 -55.62	37.92 -62.65	42.55 -67.29	48.68 -73.25	52.51 -76.95	55.50 -79.96
-40	C. C.	8.71 -23.00	21.89 -39.47	29.03 -48.16	33.96 -54.09	40.69 -61.65	45.27 -66.56	51.06 -72.74	55.10 -76.63	57.57 -79.62
-30	0. 0.	14.02 -19.40	25.98 -35.87	32.40 -45.35	36.98 -51.66	43.37 -60.16	47.67 -65.43	53.45 -71.89	57.12 -76.05	60.12 -79.00
-20	C. 0.	18.42 -15.91	29.53 -31.73	35.59 -41.53	39.97 -48.48	45.90 -57.63	50.21 -63.50	55.71 -70.74	59.45 -75.25	61.89 -78.11
-10	0. C.	21.98 -13.03	32.20 -27.77	37.99 -37.43	42.10 -44.75	47.95 -54.73	52.01 -61.07	57.47 -68.99	61.14 -73.75	63.82 -76.97

* REFER TO FIGURE 8 (RM 63 TMP-2)

*Table 16 (Cont.)

LONG (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	0. 0.	25.03 -10.98	34.47 -24.58	40.09 -33.68	43.97 -40.81	49.79 -51.13	53.68 -58.04	59.19 -66.64	62.62 -71.85	65.43 -75.60
10	0. 0.	26.69 -9.73	35.89 -22.16	41.29 -30.76	45.35 -37.45	47.60 50.95	55.10 -54.90	60.45 -63.98	63.99 -69.72	66.49 -73.50
20	12.03 8.19	27.72 -9.23	36.66 -20.94	42.09 -28.85	46.12 -35.17	44.75 51.80	55.90 -51.62	61.29 -60.94	65.12 -66.77	67.47 -70.99
30	15.19 4.58	28.02 -9.78	36.98 -20.65	42.52 -27.96	46.61 -33.76	42.51 52.42	49.05 56.52	61.99 -57.89	65.75 -63.81	68.34 -68.00
40	15.70 2.52	27.88 -10.74	37.04 -20.97	42.75 -27.78	46.93 -33.08	41.09 52.87	46.95 57.00	62.56 -55.31	66.29 -60.83	69.09 -65.05
50	16.22 -0.10	27.94 -11.71	37.18 -21.43	43.00 -27.81	47.22 -32.69	40.13 53.25	45.44 57.39	63.03 -52.83	66.75 -57.97	69.73 -61.80
60	17.67 -1.54	28.62 -12.37	37.64 -21.65	43.42 -27.70	47.59 -32.28	39.10 53.62	43.99 57.74	63.44 -50.83	67.14 -55.57	70.16 -59.05
70	20.01 -2.51	29.83 -12.58	38.34 -21.54	43.98 -27.35	48.04 -31.72	38.07 54.01	42.60 58.09	48.99 63.81	67.50 -53.22	70.45 -56.43
80	21.46 -2.95	30.74 -12.52	39.07 -21.28	44.56 -26.90	48.50 -31.14	37.13 54.42	41.43 58.44	47.27 64.16	67.83 -51.29	70.72 -54.36
90	22.37 -3.30	31.32 -12.54	39.63 -21.12	45.04 -26.58	48.92 -30.71	36.42 54.81	40.58 58.79	46.04 64.51	49.97 68.13	70.95 -52.40
100	22.50 -3.79	31.47 -12.83	39.92 -21.20	45.28 -26.52	49.25 -30.54	36.04 55.12	40.10 59.13	45.31 64.84	48.68 68.41	71.16 -51.20
110	21.99 -4.30	31.31 -13.28	40.00 -21.49	45.45 -26.71	49.53 -30.62	35.97 55.36	39.90 59.45	45.00 65.10	48.07 68.66	71.33 -50.63
120	21.21 -4.46	31.03 -13.64	40.02 -21.81	45.59 -27.01	49.78 -30.86	36.15 55.58	40.04 59.75	45.03 65.27	48.01 68.85	71.44 -50.53
130	20.44 -3.96	30.78 -13.70	40.04 -22.07	45.71 -27.34	49.97 50.00	36.54 55.77	40.40 59.99	45.37 65.39	48.48 68.94	71.47 -50.86
140	19.46 -2.93	30.50 -13.53	40.00 -22.30	45.76 -27.77	49.97 50.09	37.19 55.86	41.03 60.06	46.05 65.41	49.51 68.90	71.39 -51.65
150	17.88 -1.90	30.03 -13.50	39.71 -22.75	45.63 -28.47	49.51 50.01	38.20 55.79	42.05 59.99	47.19 65.29	68.67 -50.71	71.18 -53.04
160	15.97 -1.56	28.91 -14.11	39.00 -23.70	45.21 -29.67	49.54 -33.77	39.72 55.49	43.58 59.58	48.92 65.01	68.23 -52.27	70.82 -55.11
170	13.34 -2.25	27.30 -15.46	37.83 -25.23	44.27 -31.08	48.66 -35.43	41.27 54.90	45.46 58.84	64.26 -50.84	67.57 -54.55	70.32 -56.94

* REFER TO FIGURE 8 (RM 63 TMP-2)

*Table 17. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 800 Kilometers

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)
-180	0. 0.	21.82 -3.32	38.98 -18.00	-29.72 52.44	-42.74 69.74	-64.73 -74.15
-170	0. 0.	20.41 -6.30	37.67 -20.88	-32.82 51.49	-46.16 69.14	0. 0.
-160	0. 0.	18.12 -9.43	35.25 -23.83	49.30 -35.96	-49.68 67.56	0. 0.
-150	0. 0.	15.94 -12.56	32.11 -26.94	46.08 -39.26	64.50 -53.63	0. 0.
-140	0. 0.	13.82 -16.06	28.89 -30.29	42.25 -42.89	60.22 -58.17	0. 0.
-130	0. 0.	11.85 -19.71	25.88 -33.89	38.40 -46.95	55.08 -63.50	0. 0.
-120	0. 0.	10.15 -23.44	23.17 -37.95	34.92 -51.58	50.21 -69.40	0. 0.
-110	0. 0.	8.34 -27.78	20.83 -42.64	32.11 -56.64	46.46 -75.07	0. 0.
-100	0. 0.	6.82 -32.97	18.85 -47.82	29.88 -61.61	43.90 -79.61	0. 0.
-90	0. 0.	5.75 -38.82	17.43 -52.90	28.57 -65.91	43.04 -82.67	0. 0.
-80	-19.63 -20.07	5.36 -44.41	16.90 -57.27	28.44 -69.32	44.24 -84.34	0. 0.
-70	-10.23 -31.20	6.00 -48.91	17.71 -60.71	29.96 -71.92	48.80 -85.58	0. 0.
-60	-7.37 -36.73	7.96 -52.21	20.15 -63.26	33.62 -73.79	58.26 -86.33	0. 0.
-50	-4.28 -39.90	11.19 -54.52	24.07 -65.11	38.80 -75.12	-86.67 72.54	0. 0.
-40	-1.40 -40.85	15.05 -55.89	28.53 -66.34	44.35 -76.06	-86.87 79.17	0. 0.
-30	0.92 -40.02	18.53 -56.51	32.46 -67.07	49.18 -76.62	-87.02 81.66	0. 0.
-20	1.50 -35.83	21.03 -56.49	35.25 -67.35	52.77 -76.87	-87.13 82.89	0. 0.
-10	-2.50 -17.64	22.35 -55.86	36.93 -67.21	54.90 -76.83	83.52 -87.23	0. 0.

* REFER TO FIGURE 9 (RM 63 TMP-2)

*Table 17 (Cont.)

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)
-0	0. 0.	22.68 -54.57	37.53 -66.64	55.81 -76.50	83.81 -87.32	0. 0.
10	0. 0.	22.12 -52.26	37.15 -65.60	55.41 -75.83	83.84 -87.38	0. 0.
20	0. 0.	20.72 -48.86	35.85 -63.90	53.80 -74.76	83.62 -87.36	0. 0.
30	0. 0.	18.33 -42.71	33.73 -61.39	50.96 -73.18	83.07 -87.05	0. 0.
40	0. 0.	15.47 -28.69	31.06 -57.57	47.32 -70.86	82.00 -84.94	0. 0.
50	0. 0.	11.82 -14.54	28.30 -51.41	43.41 -67.40	79.84 -83.66	0. 0.
60	0. 0.	6.12 -2.46	25.92 -39.89	39.93 -61.97	73.71 -81.25	0. 0.
70	0. 0.	0. 0.	24.07 -23.61	37.47 -52.53	60.49 -76.80	0. 0.
80	0. 0.	0. 0.	22.71 -13.72	35.77 -36.89	54.08 -68.26	0. 0.
90	0. 0.	0. 0.	21.89 -8.52	34.85 -25.77	51.16 -52.51	0. 0.
100	0. 0.	0. 0.	21.74 -6.37	34.73 -21.03	-38.65 50.23	0. 0.
110	0. 0.	0. 0.	22.48 -6.13	35.57 -19.27	-33.14 51.42	0. 0.
120	0. 0.	0. 0.	24.38 -6.79	37.56 -18.95	-31.17 54.21	-54.02 -69.13
130	0. 0.	0. 0.	27.23 -7.82	40.62 -19.35	-30.90 58.50	-49.08 -74.54
140	0. 0.	0. 0.	30.87 -9.11	44.33 -20.30	-31.77 62.96	-49.03 -76.41
150	0. 0.	14.25 8.21	34.46 -10.73	47.91 -21.86	-33.56 66.38	-51.18 -77.18
160	0. 0.	20.03 2.94	37.27 -12.76	-24.04 50.58	-36.18 68.60	-54.57 -77.21
170	0. 0.	21.86 -0.50	38.85 -15.29	-26.76 52.15	-39.32 69.58	-59.04 -76.47

* REFER TO FIGURE 9 (RM 63 TMP-2)

*Table 18. Constant Magnetic Shell Parameter, L (Earth Radii), at Altitude 800 Kilometers

LONG (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	6.35 -C.10	24.39 -16.06	35.70 -26.22	42.30 -32.32	46.97 -36.72	-42.84 53.30	-47.04 57.46	62.95 -52.67	66.49 -56.45	69.20 -59.36
-170	1.90 -C.47	22.16 -17.76	33.80 -28.05	40.71 -34.35	45.52 -38.75	-45.10 51.86	-49.34 56.19	61.70 -55.21	65.47 -59.00	67.87 -61.80
-160	C. C.	20.30 -19.58	31.79 -30.05	38.77 -36.22	43.61 -40.79	-47.06 50.28	54.66 -51.49	60.32 -57.43	63.87 -61.50	66.41 -64.72
-150	C. C.	18.34 -20.97	30.03 -31.66	36.74 -38.12	41.57 -42.75	48.12 -49.36	52.49 -53.83	58.25 -60.13	61.91 -64.23	64.89 -67.28
-140	C. C.	16.61 -22.24	28.03 -33.38	34.94 -40.15	39.64 -44.94	46.03 -51.47	50.49 -56.13	56.14 -62.39	60.09 -66.71	62.50 -70.15
-130	C. C.	15.15 -23.49	26.29 -35.14	32.83 -41.87	37.44 -46.78	43.87 -53.68	48.13 -58.41	53.91 -65.00	57.53 -69.23	60.43 -72.35
-120	C. C.	13.42 -24.70	24.66 -36.62	31.00 -43.77	35.56 -48.83	41.67 -55.85	45.97 -60.67	51.54 -66.96	55.41 -71.28	57.92 -74.59
-110	C. C.	11.70 -25.76	22.72 -38.27	29.14 -45.67	33.52 -50.81	39.79 -57.79	43.87 -62.55	49.55 -68.95	53.05 -73.02	55.80 -76.11
-100	C. C.	9.88 -26.87	20.87 -40.06	27.12 -47.37	31.57 -52.55	37.67 -59.74	41.86 -64.39	47.43 -70.53	51.17 -74.61	53.90 -77.30
-90	C. C.	7.13 -27.99	18.78 -41.44	25.35 -49.00	29.95 -54.18	36.06 -61.05	40.43 -65.69	46.02 -71.57	49.98 -75.58	52.37 -78.26
-80	C. C.	4.30 -28.72	16.71 -42.54	23.60 -50.21	28.35 -55.32	35.06 -62.00	39.42 -66.54	45.33 -72.37	49.10 -76.20	51.72 -78.99
-70	C. C.	1.38 -28.49	15.37 -42.97	22.63 -50.68	27.70 -55.81	34.75 -62.55	39.32 -67.05	45.41 -72.87	49.35 -76.59	51.98 -79.47
-60	C. C.	0.13 -27.07	15.33 -42.52	23.07 -50.51	28.40 -55.76	35.59 -62.62	40.37 -67.18	46.41 -73.05	50.51 -76.75	53.24 -79.67
-50	C. C.	1.82 -24.70	17.29 -41.11	25.27 -49.49	30.54 -55.10	37.51 -62.16	42.21 -66.87	48.38 -72.87	52.27 -76.66	55.33 -79.60
-40	C. C.	6.84 -21.25	21.11 -38.51	28.37 -47.43	33.39 -53.42	40.33 -61.17	44.97 -66.15	50.80 -72.36	54.84 -76.33	57.33 -79.26
-30	C. C.	12.22 -17.63	25.25 -35.08	31.80 -44.65	36.49 -51.07	42.93 -59.61	47.31 -65.05	53.13 -71.52	56.87 -75.76	59.90 -78.64
-20	C. C.	16.85 -14.45	28.64 -30.95	35.07 -40.88	39.40 -47.84	45.55 -57.09	49.89 -62.99	55.47 -70.39	59.14 -74.95	61.67 -77.76
-10	C. C.	20.72 -11.70	31.47 -27.03	37.40 -36.82	41.64 -44.13	47.55 -54.14	51.68 -60.62	57.19 -68.51	60.93 -73.32	63.56 -76.63

* REFER TO FIGURE 9 (RM 63 TMP-2)

*Table 18 (Cont.)

LONG (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	C. C.	23.52 -9.87	33.66 -23.87	39.48 -33.12	43.47 -40.34	49.36 -50.66	53.33 -57.54	58.88 -66.22	62.38 -71.46	65.27 -75.28
10	C. C.	25.62 -8.52	35.28 -21.56	40.81 -30.30	44.96 -37.00	-47.15 50.63	54.78 -54.38	60.24 -63.48	63.73 -69.21	66.31 -73.05
20	C. O.	26.61 -8.13	36.04 -20.40	41.60 -28.39	45.73 -34.76	-44.32 51.48	55.64 -51.22	61.08 -60.55	64.94 -66.36	67.28 -70.62
30	C. C.	26.94 -8.67	36.37 -20.14	42.03 -27.52	46.22 -33.36	-42.14 52.09	-48.64 56.26	61.77 -57.48	65.59 -63.36	68.15 -67.56
40	10.92 7.68	26.86 -9.87	36.44 -20.45	42.27 -27.34	46.55 -32.69	-40.77 52.55	-46.61 56.74	62.34 -54.99	66.13 -60.48	68.90 -64.61
50	13.03 3.27	26.96 -10.84	36.60 -20.89	42.54 -27.36	46.85 -32.31	-39.77 52.94	-45.14 57.14	62.82 -52.49	66.59 -57.62	69.55 -61.46
60	15.56 0.61	27.65 -11.49	37.06 -21.12	42.95 -27.25	47.22 -31.89	-38.74 53.31	-43.65 57.50	63.24 -50.57	66.99 -55.30	70.06 -58.71
70	17.76 -0.75	28.82 -11.72	37.76 -21.01	43.51 -26.91	47.67 -31.36	-37.73 53.71	-42.30 57.86	-48.69 63.62	67.36 -52.95	70.36 -56.19
80	20.02 -1.29	30.01 -11.69	38.48 -20.77	44.09 -26.49	48.13 -30.80	-36.83 54.12	-41.18 58.21	-47.04 63.97	67.69 -51.09	70.62 -54.10
90	20.88 -1.69	30.56 -11.72	39.02 -20.62	44.57 -26.18	48.55 -30.39	-36.15 54.51	-40.36 58.56	-45.86 64.32	-49.73 67.99	70.86 -52.22
100	21.01 -2.13	30.72 -11.98	39.31 -20.70	44.90 -26.12	48.87 -30.23	-35.79 54.87	-39.85 58.89	-45.15 64.66	-48.49 68.27	71.07 -51.06
110	20.55 -2.51	30.55 -12.39	39.39 -20.96	45.09 -26.29	49.14 -30.30	-35.72 55.14	-39.61 59.21	-44.76 64.96	-47.90 68.51	71.23 -50.52
120	19.69 -2.55	30.27 -12.70	39.39 -21.27	45.21 -26.57	49.38 -30.53	-35.89 55.35	-39.77 59.49	-44.81 65.14	-47.84 68.69	71.33 -50.43
130	18.47 -1.99	30.00 -12.73	39.40 -21.50	45.32 -26.88	49.58 -30.86	-36.26 55.52	-40.19 59.71	-45.21 65.24	-48.30 68.77	71.35 -50.75
140	17.18 -0.96	29.61 -12.55	39.33 -21.71	45.35 -27.29	49.67 -31.34	-36.88 55.60	-40.80 59.80	-45.88 65.25	-49.30 68.72	71.27 -51.52
150	15.63 0.18	28.95 -12.50	39.01 -22.13	45.20 -27.96	49.53 -32.10	-37.86 55.51	-41.79 59.66	-46.99 65.13	68.48 -50.57	71.05 -52.88
160	12.83 1.39	27.84 -13.03	38.30 -23.03	44.70 -29.12	49.05 -33.32	-39.34 55.20	-43.27 59.25	-48.67 64.74	68.03 -52.09	70.69 -54.99
170	10.19 1.31	26.29 -14.43	37.16 -24.56	43.69 -30.63	48.18 -35.07	-40.96 54.48	-45.22 58.51	63.98 -50.64	67.37 -54.31	70.19 -56.78

* REFER TO FIGURE 9 (RM 63 IMP-2)

*Table 19. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 900 Kilometers

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)
-180	0.	26.18	42.21	-33.50	-48.32
	0.	-7.38	-21.18	56.47	-87.98
-170	0.	24.73	41.03	-36.67	-52.05
	0.	-10.35	-24.07	55.58	-87.57
-160	0.	22.36	38.66	-39.87	-56.04
	0.	-13.20	-27.07	53.59	-87.10
-150	0.	19.97	35.56	-43.34	-60.71
	0.	-16.35	-30.22	50.46	-86.57
-140	0.	17.48	32.22	-46.64	-66.78
	0.	-19.72	-33.58	-47.13	-85.96
-130	0.	15.34	29.04	-42.63	-74.87
	0.	-23.15	-37.28	-51.41	-85.17
-120	0.	13.23	26.22	-38.96	-62.55
	0.	-26.95	-41.46	-56.27	-76.23
-110	0.	11.39	23.77	-35.97	-56.23
	0.	-31.32	-46.22	-61.41	-76.88
-100	0.	9.81	21.78	-33.76	-53.14
	0.	-36.42	-51.31	-66.21	-76.28
-90	-14.51	8.54	20.39	-32.55	-52.95
	-15.56	-41.96	-56.14	-70.17	-74.29
-80	-5.75	8.07	19.94	-32.68	-58.19
	-27.88	-47.12	-60.21	-73.28	-68.70
-70	-6.45	8.74	20.91	-34.60	0.
	-35.09	-51.32	-63.39	-75.51	0.
-60	-3.97	10.77	23.54	-38.76	0.
	-39.69	-54.43	-65.77	-77.16	0.
-50	-1.06	14.05	27.61	-44.45	0.
	-42.30	-56.54	-67.48	-78.28	0.
-40	2.07	17.95	32.16	-50.44	0.
	-43.44	-57.87	-68.63	-79.02	0.
-30	4.95	21.51	36.14	-55.54	0.
	-43.00	-58.54	-69.32	-79.47	0.
-20	6.44	24.07	39.04	-59.21	0.
	-40.77	-58.60	-69.60	-79.66	0.
-10	6.29	25.54	40.79	-61.44	0.
	-34.54	-58.05	-69.48	-79.62	0.

* REFER TO FIGURE 10 (RM 63 TMP-2)

*Table 19 (Cont.)

LONG (DEG)	R=0.20 LAT (DEG)	R=0.25 LAT (DEG)	R=0.30 LAT (DEG)	R=0.35 LAT (DEG)	R=0.40 LAT (DEG)
-0	2.42 -12.18	26.02 -56.91	41.48 -68.94	62.37 -79.33	0. 0.
10	0. 0.	25.65 -55.15	41.14 -67.93	62.13 -78.77	0. 0.
20	0. 0.	24.40 -52.11	39.82 -66.39	60.66 -77.87	0. 0.
30	0. 0.	22.30 -47.46	37.73 -64.08	57.99 -76.50	0. 0.
40	0. 0.	19.75 -39.05	34.99 -60.67	54.07 -74.46	0. 0.
50	0. 0.	16.79 -24.17	32.23 -55.33	49.59 -71.47	0. 0.
60	0. 0.	13.71 -12.19	29.77 -45.98	45.56 -66.81	0. 0.
70	0. 0.	9.49 -1.40	27.92 -30.72	42.55 -59.04	0. 0.
80	0. 0.	0. 0.	26.67 -19.23	40.43 -45.45	0. 0.
90	0. 0.	0. 0.	25.96 -13.33	39.33 -32.12	-70.51 -84.85
100	0. 0.	0. 0.	25.86 -10.76	39.15 -25.85	-49.22 -86.11
110	0. 0.	0. 0.	26.56 -10.14	35.97 -23.37	-39.88 -87.00
120	0. 0.	0. 0.	28.28 -10.46	42.10 -22.66	-36.76 -87.69
130	0. 0.	0. 0.	31.07 -11.21	45.17 -22.88	-35.98 -88.20
140	0. 0.	16.27 4.17	34.50 -12.30	48.88 -23.78	-36.75 -88.51
150	0. 0.	21.36 0.81	37.89 -13.84	-25.35 52.30	-38.63 -88.61
160	0. 0.	24.78 -1.87	40.58 -15.90	-27.65 54.74	-41.41 -88.54
170	0. 0.	26.28 -4.73	42.06 -18.39	-30.42 56.19	-44.68 -88.31

* REFER TO FIGURE 10 (RM 63 TYP-2)

*Table 20. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 900 Kilometers

LONG (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	0.	23.19	35.10	41.77	46.53	-42.49	-46.75	62.69	66.30	68.99
	0.	-15.10	-25.62	-31.81	-36.31	52.91	57.15	-52.43	-56.27	-59.15
-170	0.	21.10	33.08	40.23	45.12	-44.73	-49.00	61.47	65.30	67.67
	0.	-16.67	-27.37	-33.78	-38.27	51.50	55.90	-55.01	-58.77	-61.62
-160	0.	19.12	31.14	38.19	43.11	-49.95	-54.27	60.11	63.61	66.23
	0.	-18.32	-29.30	-35.74	-40.40	-46.72	-51.21	-57.19	-61.30	-64.49
-150	0.	17.17	29.26	36.22	41.13	-47.73	-52.17	57.97	61.70	64.64
	0.	-19.96	-31.03	-37.58	-42.29	-48.96	-53.49	-59.88	-63.97	-67.06
-140	0.	15.55	27.32	34.32	39.12	-45.70	-50.22	55.91	59.87	62.29
	0.	-21.14	-32.67	-35.59	-44.42	-51.12	-55.85	-62.13	-66.48	-69.93
-130	0.	13.83	25.65	32.28	36.99	-43.47	-47.80	53.62	57.31	60.28
	0.	-22.26	-34.40	-41.35	-46.34	-53.28	-58.06	-64.67	-68.93	-72.10
-120	0.	12.14	23.87	30.50	35.16	-41.33	-45.70	51.31	55.25	57.73
	0.	-23.34	-35.95	-43.18	-48.32	-55.50	-60.37	-66.68	-71.03	-74.28
-110	0.	10.54	22.00	28.53	33.03	-39.37	-43.53	49.27	52.84	55.66
	0.	-24.55	-37.53	-45.16	-50.37	-57.38	-62.19	-68.60	-72.72	-75.88
-100	0.	8.37	20.23	26.58	31.14	-37.31	-41.58	47.20	51.00	53.71
	0.	-25.64	-39.24	-46.79	-52.04	-59.25	-63.97	-70.27	-74.27	-77.03
-90	0.	5.84	18.00	24.84	29.43	-35.75	-40.18	45.83	49.75	52.21
	0.	-26.60	-40.72	-48.34	-53.60	-60.66	-65.36	-71.28	-75.35	-77.97
-80	0.	2.68	16.02	23.02	27.88	-34.68	-39.10	45.15	48.89	51.57
	0.	-27.13	-41.74	-49.56	-54.81	-61.58	-66.18	-72.05	-75.95	-78.69
-70	0.	-0.05	14.63	22.07	27.24	-34.34	-38.99	45.22	49.12	51.82
	0.	-26.77	-42.13	-50.11	-55.32	-62.10	-66.67	-72.53	-76.33	-79.14
-60	0.	-1.90	14.55	22.48	27.90	-35.27	-40.11	46.18	50.34	53.03
	0.	-25.36	-41.67	-49.90	-55.25	-62.15	-66.78	-72.69	-76.47	-79.33
-50	0.	0.06	16.50	24.66	30.10	-37.11	-41.88	48.08	52.03	55.16
	0.	-22.42	-40.31	-48.73	-54.45	-61.69	-66.47	-72.51	-76.38	-79.25
-40	0.	5.06	20.35	27.72	32.85	-39.98	-44.55	50.56	54.53	57.10
	0.	-19.29	-37.59	-46.74	-52.78	-60.72	-65.77	-72.01	-76.05	-78.91
-30	0.	10.51	24.36	31.21	36.01	-42.51	-46.96	52.82	56.63	59.60
	0.	-15.87	-34.14	-43.88	-50.51	-59.02	-64.53	-71.17	-75.49	-78.29
-20	0.	15.36	27.78	34.39	38.84	-45.21	-49.48	55.23	58.85	61.45
	0.	-12.70	-30.18	-40.26	-47.22	-56.58	-62.50	-70.07	-74.51	-77.42
-10	0.	19.21	30.76	36.83	41.18	-47.16	-51.37	56.92	60.72	63.30
	0.	-10.36	-26.29	-36.22	-43.52	-53.57	-60.20	-68.05	-72.91	-76.31

* REFER TO FIGURE 10 (RM 63 TMP-2)

*Table 20 (Cont.)

LONG (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	C. C.	22.08 -8.44	32.87 -23.15	38.85 -32.56	42.97 -39.84	48.95 -50.21	52.99 -57.06	58.57 -65.82	62.15 -71.09	65.10 -74.96
10	O. O.	24.36 -7.29	34.56 -20.96	40.33 -29.82	44.45 -36.56	-46.71 80.33	54.42 -53.89	60.04 -63.01	63.48 -68.74	66.13 -72.64
20	C. C.	25.54 -7.02	35.43 -19.81	41.12 -27.93	45.36 -34.33	-43.90 51.16	55.39 -50.83	60.87 -60.17	64.68 -65.97	67.09 -70.26
30	C. C.	25.89 -7.57	35.78 -19.55	41.55 -27.08	45.85 -32.95	-41.78 51.78	-48.24 56.01	61.56 -57.08	65.43 -62.93	67.96 -67.15
40	C. C.	25.86 -8.71	35.87 -19.91	41.81 -26.89	46.18 -32.30	-40.44 52.24	-46.28 56.49	62.13 -54.58	65.97 -60.16	68.71 -64.18
50	C. O.	26.01 -9.78	36.04 -20.36	42.08 -26.71	46.49 -31.92	-39.39 52.63	-44.82 56.90	62.62 -52.16	66.44 -57.28	69.37 -61.15
60	11.75 4.12	26.70 -10.62	36.50 -20.58	42.50 -26.80	46.86 -31.51	-38.38 53.01	-43.32 57.26	63.04 -50.31	66.85 -55.06	69.93 -58.38
70	15.55 1.87	27.83 -10.86	37.19 -20.49	43.05 -26.48	47.31 -31.00	-37.41 53.42	-42.02 57.63	-48.40 63.43	67.22 -52.68	70.26 -55.96
80	17.60 0.63	28.97 -10.87	37.89 -20.28	43.62 -26.07	47.77 -30.47	-36.54 53.82	-40.94 57.98	-46.81 63.80	67.55 -50.89	70.53 -53.86
90	18.99 -0.09	29.74 -10.91	38.42 -20.14	44.10 -25.78	48.18 -30.08	-35.89 54.21	-40.15 58.33	-45.68 64.14	-49.50 67.86	70.76 -52.04
100	19.25 -0.50	29.97 -11.16	38.70 -20.21	44.42 -25.73	48.50 -29.88	-35.53 54.57	-39.56 58.66	-45.00 64.47	-48.31 68.13	70.97 -50.94
110	18.56 -0.78	29.73 -11.52	38.78 -20.45	44.64 -25.88	48.76 -29.98	-35.47 54.88	-39.32 58.97	-44.53 64.77	-47.73 68.37	71.13 -50.41
120	17.45 -0.71	29.34 -11.79	38.77 -20.73	44.79 -26.14	48.98 -30.20	-35.63 55.12	-39.47 59.23	-44.58 65.01	-47.68 68.53	71.23 -50.33
130	16.26 -0.09	28.96 -11.79	38.76 -20.94	44.92 -26.44	49.16 -30.51	-35.99 55.28	-39.98 59.43	-45.06 65.10	-48.13 68.60	71.24 -50.64
140	14.90 1.86	28.54 -11.60	38.67 -21.14	44.93 -26.83	49.22 -30.97	-36.59 55.34	-40.58 59.50	-45.71 65.09	-49.11 68.53	71.15 -51.39
150	11.70 4.03	27.88 -11.53	38.34 -21.53	44.71 -27.47	49.06 -31.71	-37.54 55.24	-41.54 59.35	-46.79 64.94	68.29 -50.43	70.93 -52.72
160	C. C.	26.80 -11.99	37.63 -22.38	44.12 -28.57	48.58 -32.88	-38.97 54.89	-42.98 58.92	-48.43 64.48	67.84 -51.91	70.56 -54.78
170	O. O.	25.32 -13.25	36.52 -23.84	43.12 -30.19	47.72 -34.60	-40.67 54.07	-44.98 58.18	63.71 -50.45	67.17 -54.08	70.07 -56.62

* REFER TO FIGURE 10 (RM 63 TMP-2)

*Table 21. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 1000 Kilometers

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)
-180	0.	29.91	45.49	-37.58	-55.48
	0.	-10.92	-24.37	61.10	-82.35
-170	0.	28.40	44.39	-40.82	-59.96
	0.	-13.71	-27.32	60.27	-81.33
-160	0.	26.11	42.15	-44.19	-66.27
	0.	-16.62	-30.36	58.50	-79.00
-150	0.	23.45	39.07	-47.84	0.
	0.	-19.75	-33.55	55.53	0.
-140	0.	20.88	35.65	-51.75	0.
	0.	-22.96	-37.00	-51.90	0.
-130	0.	18.43	32.34	-47.56	0.
	0.	-26.46	-40.80	-56.53	0.
-120	0.	16.24	29.36	-43.63	0.
	0.	-30.32	-45.10	-61.72	0.
-110	0.	14.27	26.84	-40.39	0.
	0.	-34.70	-49.92	-66.98	0.
-100	-7.49	12.53	24.81	38.21	0.
	-16.70	-39.75	-54.91	-71.60	0.
-90	-5.59	11.30	23.49	37.13	0.
	-25.14	-45.06	-59.50	-75.13	0.
-80	-4.50	10.83	23.18	37.61	0.
	-32.19	-49.88	-63.30	-77.83	0.
-70	-3.15	11.50	24.29	40.07	0.
	-38.03	-52.73	-68.24	-75.60	0.
-60	-0.96	13.58	27.15	44.98	0.
	-42.14	-56.62	-68.42	-80.89	0.
-50	1.92	16.95	31.38	51.72	0.
	-44.76	-58.64	-69.99	-81.78	0.
-40	5.30	20.91	36.03	58.36	0.
	-45.88	-59.98	-71.06	-82.34	0.
-30	8.23	24.49	40.07	63.52	0.
	-45.79	-60.63	-71.69	-82.67	0.
-20	10.35	27.11	43.14	66.87	0.
	-44.34	-60.73	-71.94	-82.81	0.
-10	11.03	28.66	44.94	68.76	0.
	-40.84	-60.33	-71.83	-82.76	0.

* REFER TO FIGURE 11 (RM 63 TMP-2)

*Table 21 (Cont.)

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)
-0	10.38 -31.84	29.25 -59.30	45.72 -71.34	69.57 -82.53	0. 0.
10	7.11 -11.06	28.96 -57.57	45.41 -70.43	69.49 -82.09	0. 0.
20	0. 0.	27.82 -55.14	44.14 -68.98	68.50 -81.36	0. 0.
30	0. 0.	25.94 -51.14	42.00 -66.86	66.35 -80.22	0. 0.
40	0. 0.	23.46 -44.75	39.20 -63.75	62.80 -78.62	0. 0.
50	0. 0.	20.88 -32.85	36.32 -59.03	57.92 -76.14	0. 0.
60	0. 0.	18.32 -19.27	33.74 -51.27	52.85 -72.24	0. 0.
70	0. 0.	15.96 -9.32	31.80 -37.99	48.76 -65.77	0. 0.
80	0. 0.	13.17 -1.47	30.49 -24.95	46.05 -54.46	0. 0.
90	0. 0.	10.12 4.79	29.76 -18.04	44.52 -39.61	0. 0.
100	0. 0.	0. 0.	29.67 -14.86	44.23 -31.31	0. 0.
110	0. 0.	0. 0.	30.41 -13.79	45.07 -27.85	-50.96 -76.64
120	0. 0.	13.51 3.89	32.11 -13.84	47.38 -26.64	-44.23 -80.39
130	0. 0.	17.72 1.11	34.82 -14.45	-26.65 50.54	-42.55 -81.83
140	0. 0.	21.92 -1.16	38.14 -15.47	-27.51 54.18	-43.00 -82.62
150	0. 0.	25.76 -3.27	41.39 -16.96	-29.13 57.43	-44.83 -83.01
160	0. 0.	28.51 -5.67	43.90 -19.02	-31.51 59.60	-47.94 -83.09
170	0. 0.	30.01 -8.15	45.33 -21.56	-34.38 60.87	-51.54 -82.89

* REFER TO FIGURE 11 (RM 63 TMP-2)

*Table 22. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 1000 Kilometers

LONG (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	0. 0.	22.02 -13.81	34.35 -25.03	41.26 -31.32	46.10 -35.91	-42.14 52.53	-46.48 56.85	62.44 -52.20	66.12 -56.09	68.77 -58.95
-170	0. 0.	20.07 -15.61	32.37 -26.70	39.67 -33.22	44.62 -37.81	-44.33 51.15	-48.67 55.62	61.23 -54.73	65.13 -58.54	67.47 -61.45
-160	0. 0.	17.86 -17.10	30.51 -28.55	37.62 -35.27	42.62 -40.02	49.49 -46.38	53.90 -50.93	59.84 -56.94	63.36 -61.11	66.06 -64.26
-150	0. 0.	16.03 -18.58	28.51 -30.40	35.72 -37.05	40.71 -41.85	47.35 -48.57	51.85 -53.17	57.69 -59.58	61.49 -63.72	64.39 -66.86
-140	0. 0.	14.31 -20.06	26.64 -31.98	33.71 -39.00	38.61 -43.92	45.38 -50.79	49.94 -55.57	55.68 -61.87	59.59 -66.25	62.10 -69.66
-130	0. 0.	12.48 -21.06	25.02 -33.63	31.74 -40.85	36.54 -45.91	43.07 -52.89	47.48 -57.72	53.35 -64.35	57.10 -68.65	60.13 -71.86
-120	0. 0.	10.91 -22.02	23.09 -35.31	30.03 -42.61	34.68 -47.83	41.00 -55.16	45.43 -60.08	51.09 -66.41	55.08 -70.79	57.54 -73.99
-110	0. 0.	9.16 -23.07	21.30 -36.80	27.95 -44.57	32.55 -49.93	38.96 -56.98	43.20 -61.84	49.00 -68.27	52.63 -72.44	55.52 -75.65
-100	0. 0.	6.92 -24.22	19.46 -38.42	26.07 -46.23	30.73 -51.56	36.96 -58.79	41.30 -63.57	46.98 -70.02	50.84 -73.94	53.53 -76.78
-90	0. 0.	4.39 -25.23	17.24 -40.02	24.21 -47.70	28.92 -53.04	35.44 -60.29	39.92 -65.05	45.64 -71.00	49.53 -75.12	52.05 -77.70
-80	0. 0.	1.11 -25.58	15.35 -40.97	22.45 -48.85	27.42 -54.19	34.28 -61.17	38.78 -65.84	44.95 -71.75	48.68 -75.71	51.43 -78.39
-70	0. 0.	-2.16 -25.10	13.78 -41.32	21.53 -49.40	26.79 -54.79	33.95 -61.67	38.66 -66.31	45.04 -72.20	48.89 -76.07	51.66 -78.83
-60	0. 0.	-3.97 -22.93	13.68 -40.86	21.90 -49.14	27.41 -54.68	34.94 -61.70	39.78 -66.40	45.95 -72.35	50.17 -76.21	52.82 -79.01
-50	0. 0.	-2.70 -20.21	15.73 -39.38	23.98 -48.00	29.55 -53.80	36.73 -61.24	41.56 -66.09	47.79 -72.17	51.81 -76.11	55.00 -78.92
-40	0. 0.	2.29 -16.75	19.47 -36.69	27.09 -46.07	32.32 -52.18	39.50 -60.29	44.15 -65.39	50.32 -71.66	54.22 -75.78	56.88 -78.58
-30	0. 0.	8.17 -13.68	23.41 -33.19	30.64 -43.14	35.54 -49.96	42.10 -58.46	46.62 -64.01	52.51 -70.84	56.39 -75.22	59.32 -77.97
-20	0. 0.	13.28 -10.93	26.95 -29.30	33.71 -39.58	38.29 -46.63	44.82 -56.09	49.08 -62.03	55.00 -69.62	58.56 -74.09	61.25 -77.11
-10	0. 0.	17.37 -8.64	30.08 -25.57	36.27 -35.63	40.74 -42.94	46.78 -53.03	51.06 -59.72	56.65 -67.62	60.51 -72.53	63.06 -76.01

* REFER TO FIGURE 11 (RM 63 TMP-2)

*Table 22 (Cont.)

LONG (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	0. 0.	20.70 -6.99	32.11 -22.44	38.24 -32.01	42.50 -39.30	48.54 -49.72	52.66 -56.60	58.28 -65.44	61.92 -70.74	64.90 -74.52
10	C. 0.	22.82 -6.05	33.73 -20.36	39.82 -29.28	43.94 -36.12	-46.29 50.03	54.06 -53.42	59.76 -62.57	63.24 -68.29	65.96 -72.24
20	0. 0.	24.24 -5.90	34.78 -19.15	40.64 -27.45	44.98 -33.90	-43.49 50.85	55.15 -50.47	60.66 -59.75	64.42 -65.60	66.91 -69.89
30	0. 0.	24.81 -6.47	35.19 -18.91	41.08 -26.64	45.48 -32.55	-41.43 51.46	-47.86 55.76	61.35 -56.71	65.28 -62.53	67.77 -66.76
40	C. 0.	24.84 -7.56	35.30 -19.26	41.35 -26.45	45.81 -31.91	-40.13 51.93	-45.95 56.25	61.93 -54.18	65.81 -59.80	68.53 -63.77
50	C. 0.	25.07 -8.77	35.49 -19.79	41.63 -26.47	46.13 -31.54	-39.02 52.33	-44.45 56.66	62.42 -51.85	66.29 -56.96	69.19 -60.85
60	0. 0.	25.76 -9.66	35.95 -20.06	42.05 -26.36	46.50 -31.14	-38.03 52.71	-43.00 57.03	62.85 -50.06	66.70 -54.75	69.77 -58.07
70	11.21 5.60	26.85 -10.02	36.62 -19.97	42.60 -26.05	46.95 -30.65	-37.10 53.12	-41.74 57.39	-48.12 63.24	67.07 -52.42	70.16 -55.74
80	15.24 3.52	27.96 -10.07	37.31 -19.70	43.17 -25.67	47.41 -30.14	-36.25 53.53	-40.70 57.75	-46.59 63.61	67.41 -50.71	70.43 -53.62
90	16.50 2.59	28.70 -10.11	37.83 -19.53	43.63 -25.39	47.81 -29.68	-35.63 53.92	-39.92 58.10	-45.50 63.96	-49.28 67.72	70.67 -51.87
100	16.80 1.96	28.93 -10.35	38.11 -19.62	43.95 -25.34	48.13 -29.45	-35.28 54.27	-39.27 58.43	-44.76 64.28	-48.12 68.00	70.88 -50.81
110	16.24 1.67	28.71 -10.68	38.18 -19.94	44.15 -25.48	48.38 -29.54	-35.22 54.57	-39.04 58.72	-44.30 64.57	-47.56 68.22	71.03 -50.30
120	15.25 2.07	28.33 -10.91	38.17 -20.21	44.30 -25.72	48.58 -29.83	-35.37 54.84	-39.18 58.97	-44.34 64.80	-47.52 68.38	71.12 -50.23
130	13.02 3.41	27.94 -10.88	38.14 -20.40	44.40 -26.00	48.74 -30.18	-35.72 55.04	-39.67 59.15	-44.86 64.93	-47.95 68.44	71.13 -50.54
140	10.18 8.85	27.50 -10.68	38.02 -20.58	44.39 -26.37	48.78 -30.62	-36.30 55.08	-40.36 59.20	-45.54 64.91	-48.91 68.36	71.03 -51.27
150	0. 0.	26.84 -10.58	37.68 -20.94	44.15 -26.98	48.61 -31.33	-37.22 54.96	-41.29 59.04	-46.59 64.69	68.10 -50.29	70.80 -52.56
160	C. 0.	25.79 -10.97	36.97 -21.75	43.56 -28.04	48.12 -32.46	-38.60 54.49	-42.69 58.60	-48.19 64.21	67.64 -51.74	70.44 -54.58
170	C. C.	24.12 -12.10	35.89 -23.13	42.58 -29.66	47.27 -34.11	-40.37 53.68	-44.64 57.86	63.45 -50.27	66.98 -53.86	69.90 -56.47

* REFER TO FIGURE 11 (RM 63 TMP-2)

*Table 23. Constant Magnetic Field Intensity,
B (Gauss), at Altitude 1200 Kilometers

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)
-180	0.	36.40	-31.09	-47.28
	0.	-17.12	52.51	77.48
	0.	0.	0.	89.30
	0.	0.	0.	-88.85
-170	10.18	35.15	-34.15	-50.93
	2.50	-19.99	51.58	76.61
	0.	0.	0.	89.43
	0.	0.	0.	-88.41
-160	9.04	32.87	49.55	74.78
	-1.75	-22.88	-37.36	-54.88
	0.	0.	0.	89.57
	0.	0.	0.	-87.94
-150	7.83	30.12	46.66	72.67
	-5.90	-25.98	-40.72	-59.55
	0.	0.	0.	89.70
	0.	0.	0.	-87.44
-140	6.76	27.20	43.16	68.78
	-10.04	-29.26	-44.40	-65.21
	0.	0.	0.	89.83
	0.	0.	0.	-86.88
-130	5.74	24.47	39.54	63.70
	-13.75	-32.81	-48.55	-72.74
	0.	0.	0.	89.93
	0.	0.	0.	-86.19
-120	4.61	21.99	36.32	58.38
	-17.76	-36.78	-53.19	-83.42
	0.	0.	0.	-85.21
-110	3.33	19.84	33.59	54.00
	-22.22	-41.28	-58.14	0.
-100	2.34	18.02	31.55	51.44
	-27.36	-46.21	-62.89	0.
-90	1.74	16.77	30.32	50.93
	-33.11	-51.08	-66.96	89.92
-80	1.73	16.36	30.33	53.60
	-38.76	-55.34	-70.13	89.55

* REFER TO FIGURE 12 (RM 63 TMP-2)

*Table 23 (Cont.)

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=C.30 LAT (DEG)	B=C.35 LAT (DEG)
-70	2.60 -43.42	17.17 -58.70	32.00 -72.59	62.11 86.45
-60	4.61 -46.84	19.44 -61.24	35.35 -74.32	C. C.
-50	7.51 -49.10	22.99 -63.03	40.06 -75.57	C. C.
-40	11.01 -50.33	27.04 -64.22	45.05 -76.41	C. C.
-30	14.25 -50.56	30.67 -64.88	49.39 -76.90	C. C.
-20	16.62 -49.94	33.39 -65.05	52.64 -77.09	C. C.
-10	17.95 -48.11	35.05 -64.73	54.61 -76.98	C. C.
-0	18.30 -45.22	35.79 -63.89	55.51 -76.58	C. C.
10	17.68 -39.86	35.62 -62.49	55.32 -75.84	C. C.
20	16.13 -28.55	34.59 -60.45	54.13 -74.67	C. 0.
30	13.48 -16.73	32.83 -57.29	51.97 -72.97	C. C.
40	10.04 -9.42	30.54 -52.57	48.98 -70.47	C. C.
50	0. 0.	28.10 -45.04	45.67 -66.77	0. C.
60	0. 0.	25.93 -32.75	42.66 -61.05	89.99 0.
70	0. 0.	24.18 -20.80	40.17 -51.63	89.94 C.
80	0. 0. 0.	22.84 -12.89 0.	38.57 -38.12 C.	89.95 -81.39 -85.29

* REFER TO FIGURE 12 (RM 63 TMP-2)

*Table 23 (Cont.)

LONG (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)
90	0.	22.01	37.67	68.67
	0.	-8.19	-28.17	77.17
	0.	0.	0.	-63.17
	0.	0.	0.	-86.57
100	0.	21.81	37.54	-46.75
	0.	-6.05	-23.29	63.78
	0.	0.	0.	87.25
	0.	0.	0.	-87.55
110	0.	22.44	38.30	-39.15
	0.	-5.63	-21.24	64.18
	0.	0.	0.	88.94
	0.	0.	0.	-88.32
120	0.	24.12	40.04	-36.28
	0.	-6.11	-20.67	67.41
	0.	0.	0.	89.06
	0.	0.	0.	-88.93
130	0.	26.65	42.79	-35.55
	0.	-7.04	-20.95	71.15
	0.	0.	0.	89.07
	0.	0.	0.	-89.36
140	0.	29.81	45.93	-36.27
	0.	-8.31	-21.85	74.19
	0.	0.	0.	89.07
	0.	0.	0.	-89.59
150	0.	32.81	48.89	-38.04
	0.	-10.01	-23.37	76.17
	0.	0.	0.	89.08
	0.	0.	0.	-89.63
160	0.	35.22	-25.51	-40.59
	0.	-11.99	51.11	77.34
	0.	0.	0.	89.12
	0.	0.	0.	-89.50
170	0.	36.43	-28.16	-43.79
	0.	-14.46	52.35	77.70
	0.	0.	0.	89.20
	0.	0.	0.	-89.22

* REFER TO FIGURE 12 (RM 63 TMP-2)

*Table 24. Constant Magnetic Shell Parameter, L (Earth Radii), at Altitude 1200 Kilometers

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	19.64 -11.26	32.84 -23.51	40.28 -30.38	45.28 -35.14	-41.48 51.81	-45.94 56.27	61.95 -51.75	65.77 -55.74	68.36 -58.55
-170	17.31 -12.91	31.01 -25.43	38.46 -32.14	43.58 -36.92	-43.55 50.49	-48.03 55.09	60.79 -54.17	64.67 -58.09	67.10 -61.11
-160	15.40 -14.66	29.06 -27.11	36.53 -34.15	41.69 -39.01	48.65 -45.74	53.19 -50.40	59.22 -56.48	62.88 -60.73	65.73 -63.81
-150	13.32 -15.94	27.05 -28.93	34.67 -36.03	39.86 -41.00	46.61 -47.82	51.24 -52.53	57.16 -59.00	61.09 -63.23	63.91 -66.46
-140	11.48 -17.09	25.32 -30.64	32.56 -37.85	37.63 -42.95	44.65 -50.15	49.19 -55.03	55.25 -61.37	59.06 -65.82	61.72 -69.13
-130	9.87 -18.18	23.42 -32.14	30.71 -39.83	35.69 -45.09	42.32 -52.13	46.86 -57.06	52.81 -63.73	56.68 -68.10	59.73 -71.40
-120	7.86 -19.20	21.62 -33.77	28.78 -41.51	33.65 -46.88	40.36 -54.34	44.88 -59.33	50.67 -65.89	54.62 -70.34	57.17 -73.43
-110	6.03 -20.20	19.97 -35.41	26.82 -43.32	31.64 -48.84	38.18 -56.22	42.57 -61.18	48.46 -67.65	52.22 -71.91	55.24 -75.23
-100	3.70 -20.94	17.81 -36.85	25.07 -45.16	29.90 -50.62	36.29 -57.91	40.77 -62.80	46.55 -69.30	50.52 -73.34	53.16 -76.32
-90	0.79 -21.50	15.80 -38.27	22.99 -46.50	27.94 -51.99	34.80 -59.42	39.24 -64.21	45.27 -70.47	49.09 -74.52	51.75 -77.18
-80	-3.05 -21.35	13.71 -39.36	21.36 -47.53	26.53 -53.04	33.51 -60.40	38.15 -65.20	44.42 -71.17	48.27 -75.26	51.14 -77.84
-70	-7.37 -20.05	12.15 -39.71	20.49 -47.99	25.93 -53.56	33.18 -60.85	38.02 -65.62	44.50 -71.59	48.45 -75.60	51.34 -78.25
-60	-14.31 -15.17	12.01 -39.09	20.80 -47.71	26.48 -53.43	34.09 -60.86	39.06 -65.69	45.52 -71.71	49.73 -75.72	52.42 -78.40
-50	C. C.	14.01 -37.44	22.68 -46.63	28.44 -52.57	35.99 -60.40	40.94 -65.38	47.24 -71.53	51.37 -75.61	54.47 -78.31
-40	C. C.	17.55 -34.99	25.88 -44.76	31.31 -51.03	38.58 -59.27	43.37 -64.56	49.79 -71.02	53.65 -75.28	56.46 -77.96
-30	1.36 -6.84	21.62 -31.38	29.38 -41.73	34.51 -48.63	41.31 -57.42	45.97 -63.05	51.94 -70.23	55.94 -74.55	58.77 -77.35
-20	8.09 -5.94	25.37 -27.52	32.41 -38.15	37.24 -45.52	43.90 -55.17	48.31 -61.17	54.31 -68.73	58.01 -73.32	60.85 -76.51
-10	13.18 -4.74	28.26 -23.96	35.20 -34.40	39.84 -41.82	46.05 -52.01	50.47 -58.69	56.14 -66.81	60.13 -71.81	62.59 -75.44

* REFER TO FIGURE 12 (RM 63 TMP-2)

*Table 24 (Cont.)

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	16.94 -3.54	30.66 -21.03	37.07 -30.92	41.57 -38.23	47.74 -48.70	52.01 -55.76	57.72 -64.64	61.48 -70.09	64.37 -73.68
10	19.88 -2.91	32.18 -18.97	38.58 -28.22	42.96 -35.27	49.20 -45.49	53.38 -52.54	59.15 -61.74	62.77 -67.47	65.63 -71.51
20	21.22 -3.05	33.19 -17.81	39.62 -26.50	43.98 -33.04	42.69 50.25	-49.71 54.51	60.26 -58.86	63.93 -64.90	66.56 -68.99
30	21.84 -3.93	33.70 -17.63	40.17 -25.76	44.66 -31.75	-40.74 50.86	-47.14 55.28	60.95 -56.02	64.95 -61.79	67.41 -66.06
40	22.06 -5.29	33.90 -17.96	40.46 -25.58	45.10 -31.14	-39.39 51.33	-45.34 55.77	61.53 -53.45	65.51 -59.02	68.18 -63.01
50	22.45 -6.40	34.20 -18.44	40.75 -25.60	45.42 -30.78	-38.30 51.74	-43.75 56.19	62.02 -51.26	65.99 -56.37	68.84 -60.29
60	23.45 -7.27	34.82 -18.71	41.17 -25.49	45.80 -30.41	-37.36 52.13	-42.38 56.57	-49.44 62.46	66.41 -54.11	69.43 -57.50
70	24.95 -7.70	35.52 -18.63	41.71 -25.23	46.25 -29.95	-36.48 52.54	-41.20 56.94	-47.60 62.87	66.79 -51.94	69.95 -55.34
80	25.99 -7.86	36.19 -18.40	42.27 -24.83	46.70 -29.31	-35.70 52.95	-40.24 57.30	-46.16 63.24	67.13 -50.35	70.24 -53.18
90	26.69 -7.97	36.69 -18.26	42.72 -24.50	47.10 -28.83	-35.12 53.33	-39.32 57.65	-45.15 63.59	-48.84 67.44	70.48 -51.55
100	26.91 -8.26	36.95 -18.33	43.03 -24.42	47.40 -28.62	-34.71 53.67	-38.71 57.96	-44.29 63.91	-47.76 67.72	70.68 -50.56
110	26.73 -8.64	37.02 -18.59	43.21 -24.59	47.64 -28.68	-34.62 53.96	-38.49 58.24	-43.85 64.18	-47.24 67.93	70.83 -50.10
120	26.37 -8.86	36.99 -18.89	43.33 -24.89	47.81 -28.93	-34.82 54.20	-38.61 58.47	-43.89 64.38	-47.20 68.07	70.92 -50.03
130	25.96 -8.76	36.92 -19.10	43.40 -25.17	47.94 -29.32	-35.20 54.37	-39.07 58.61	-44.38 64.49	-47.61 68.11	70.91 -50.33
140	25.50 -8.42	36.78 -19.31	43.35 -25.49	47.94 -29.90	-35.74 54.40	-39.91 58.63	-45.22 64.44	-48.53 68.01	70.80 -51.03
150	24.75 -8.21	36.41 -19.75	43.08 -26.05	47.73 -30.58	-36.60 54.21	-40.81 58.44	-46.21 64.19	67.73 -50.03	70.56 -52.26
160	23.35 -8.58	35.71 -20.53	42.49 -27.03	47.23 -31.63	-37.90 53.73	-42.13 57.99	-47.73 63.70	67.27 -51.41	70.19 -54.19
170	21.58 -9.86	34.57 -21.77	41.53 -28.52	46.40 -33.18	-39.73 52.92	-43.98 57.26	-49.86 62.95	66.61 -53.43	69.47 -56.17

* REFER TO FIGURE 12 (RM 63 TMP-2)

*Table 25. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 1400 Kilometers

LONG (DEG)	B=0.15 LAT (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)
-180	0. 0.	22.70 -5.90	42.65 -23.12	-38.68 60.97	-66.24 -72.12
-170	0. 0.	21.43 -8.75	41.53 -26.01	-41.98 60.13	0. 0.
-160	0. 0.	19.54 -11.70	39.42 -29.01	-45.39 58.50	0. 0.
-150	0. 0.	17.31 -14.93	36.63 -32.18	-49.16 55.83	0. 0.
-140	0. 0.	15.31 -18.07	33.56 -35.58	52.43 -53.39	0. 0.
-130	0. 0.	13.25 -21.56	30.57 -39.31	48.60 -58.17	0. 0.
-120	0. 0.	11.46 -25.35	27.87 -43.48	44.90 -63.37	0. 0.
-110	0. 0.	9.90 -29.54	25.55 -48.10	42.01 -68.50	0. 0.
-100	0. 0.	8.41 -34.33	23.69 -52.88	39.81 -72.92	0. 0.
-90	0. 0.	7.44 -39.50	22.50 -57.34	38.91 -76.27	0. 0.
-80	0. 0.	7.18 -44.35	22.24 -61.09	39.44 -78.67	0. 0.
-70	0. 0.	7.91 -48.33	23.28 -64.02	41.98 -80.29	0. 0.
-60	-13.48 -26.63	9.89 -51.32	25.81 -66.22	46.42 -81.48	0. 0.
-50	-9.36 -30.41	12.87 -53.32	29.55 -67.78	52.14 -82.26	0. 0.
-40	-6.69 -30.55	16.45 -54.53	33.72 -68.82	57.69 -82.75	0. 0.
-30	-4.93 -26.94	19.79 -54.97	37.43 -69.40	62.07 -83.03	0. 0.
-20	-8.47 -15.52	22.30 -54.64	40.19 -69.57	64.99 -83.12	0. 0.
-10	0. 0.	23.88 -53.53	42.03 -69.32	66.86 -83.04	0. 0.

* REFER TO FIGURE 13 (RM 63 TMP-2)

*Table 25 (Cont.)

LONG (DEG)	B=0.15 LAT (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)
-0	0. 0.	24.56 -51.64	42.85 -68.64	67.70 -82.78	0. 0.
10	0. 0.	24.37 -48.71	42.75 -67.48	67.71 -82.31	0. 0.
20	0. 0.	23.33 -44.20	41.78 -65.74	66.90 -81.54	0. 0.
30	0. 0.	21.56 -36.85	40.00 -63.14	65.13 -80.34	0. 0.
40	0. 0.	19.23 -26.85	37.78 -59.40	62.48 -78.65	0. 0.
50	0. 0.	16.50 -17.65	35.32 -53.68	58.82 -76.00	0. 0.
60	0. 0.	13.40 -9.26	33.11 -44.67	54.77 -71.86	0. 0.
70	0. 0.	8.49 -0.01	31.37 -32.40	51.41 -65.05	0. 0.
80	0. 0.	0. 0.	30.17 -22.61	48.90 -54.03	0. 0.
90	0. 0.	0. 0.	29.47 -16.85	47.53 -41.06	0. 0.
100	0. 0.	0. 0.	29.38 -13.95	47.20 -33.23	0. 0.
110	0. 0.	0. 0.	30.03 -12.87	48.00 -29.57	0. 0.
120	0. 0.	0. 0.	31.52 -12.85	49.81 -28.73	-54.78 -70.29
130	0. 0.	0. 0.	33.85 -13.42	-28.12 52.65	-50.17 -74.81
140	0. 0.	11.49 8.68	36.68 -14.45	-28.89 55.53	-49.84 -76.38
150	0. 0.	18.27 3.08	39.41 -15.94	-30.46 58.16	-51.78 -76.99
160	0. 0.	21.46 -0.29	41.52 -17.93	-32.78 59.87	-54.75 -76.88
170	0. 0.	22.83 -2.96	42.64 -20.40	-35.55 60.88	-59.19 -75.96

* REFER TO FIGURE 13 (RM 63 TMP-2)

*Table 26. Constant Magnetic Shell Parameter, L (Earth Radii), at Altitude 1400 Kilometers

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	16.54 -8.26	31.42 -22.05	39.13 -29.28	44.33 -34.18	-40.85 51.13	-45.44 55.72	61.50 -51.32	65.43 -55.42	67.97 -58.17
-170	14.42 -10.10	29.64 -23.93	37.32 -31.11	42.60 -36.08	49.81 -42.81	-47.42 54.38	60.37 -53.63	64.15 -57.66	66.74 -60.79
-160	12.13 -11.38	27.52 -25.74	35.51 -32.99	40.82 -38.04	47.85 -45.12	-49.85 52.52	58.64 -56.03	62.43 -60.36	65.41 -63.38
-150	10.29 -12.61	25.67 -27.40	33.45 -35.05	38.80 -40.19	45.92 -47.10	50.67 -51.93	56.66 -58.45	60.70 -62.76	63.45 -66.08
-140	8.10 -13.81	23.75 -29.16	31.46 -36.75	36.71 -42.02	43.81 -49.37	48.48 -54.31	54.77 -60.89	58.55 -65.42	61.35 -68.64
-130	6.20 -14.95	21.89 -30.73	29.65 -38.60	34.84 -44.07	41.61 -51.42	46.27 -56.44	52.30 -63.14	56.29 -67.59	59.26 -70.98
-120	4.31 -15.58	20.23 -32.21	27.59 -40.47	32.66 -45.99	39.64 -53.50	44.16 -58.59	50.27 -65.39	54.12 -69.88	56.81 -72.91
-110	1.93 -16.11	18.24 -33.79	25.77 -42.13	30.78 -47.81	37.44 -55.51	41.97 -60.57	47.96 -67.07	51.84 -71.41	54.97 -74.75
-100	-0.56 -16.46	16.27 -35.37	23.81 -43.87	28.85 -49.67	35.65 -57.09	40.27 -62.08	46.13 -68.63	50.21 -72.76	52.80 -75.87
-90	-4.43 -16.21	14.21 -36.61	21.85 -45.37	27.00 -51.01	33.99 -58.49	38.59 -63.41	44.86 -69.97	48.66 -73.89	51.45 -76.71
-80	C. C.	12.04 -37.53	20.33 -46.29	25.68 -51.96	32.77 -59.56	37.55 -64.41	43.90 -70.63	47.87 -74.74	50.86 -77.32
-70	C. C.	10.59 -37.79	19.33 -46.69	25.10 -52.42	32.45 -60.09	37.41 -64.98	43.96 -71.02	48.02 -75.16	51.03 -77.71
-60	C. C.	10.41 -37.17	19.67 -46.40	25.59 -52.27	33.28 -60.08	38.37 -65.04	45.11 -71.13	49.22 -75.27	52.04 -77.85
-50	C. C.	12.13 -35.63	21.44 -45.36	27.38 -51.44	35.29 -59.48	40.36 -64.59	46.72 -70.93	50.95 -75.15	53.97 -77.74
-40	C. C.	15.76 -32.90	24.66 -43.24	30.35 -49.98	37.71 -58.23	42.63 -63.62	49.12 -70.44	53.10 -74.71	56.06 -77.39
-30	C. C.	19.92 -29.55	27.97 -40.42	33.35 -47.39	40.57 -56.46	45.36 -62.18	51.40 -69.48	55.52 -73.81	58.26 -76.79
-20	C. C.	23.45 -25.78	31.19 -36.80	36.25 -44.35	43.03 -54.11	47.59 -60.38	53.66 -67.92	57.49 -72.61	60.48 -75.97
-10	C. C.	26.53 -22.26	33.87 -33.08	38.71 -40.76	45.36 -51.08	49.87 -57.74	55.66 -66.08	59.61 -71.15	62.15 -74.88

* REFER TO FIGURE 13 (RM 63 TMP-2)

*Table 26 (Cont.)

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	11.27 2.68	28.99 -19.55	35.96 -29.84	40.68 -37.21	46.99 -47.74	51.40 -54.97	57.18 -63.74	61.07 -69.26	63.87 -72.93
10	15.35 1.30	30.72 -17.50	37.39 -27.16	42.02 -34.33	48.40 -44.66	52.72 -51.72	58.58 -61.00	62.32 -66.72	65.31 -70.85
20	17.23 0.50	31.69 -16.48	38.41 -25.56	43.02 -32.18	49.53 -41.92	-48.88 53.84	59.81 -58.05	63.46 -64.04	66.22 -68.19
30	18.40 -0.66	32.20 -16.35	39.04 -24.87	43.70 -30.97	-40.09 50.28	-46.46 54.73	60.56 -55.38	64.48 -61.12	67.07 -65.42
40	19.06 -2.04	32.45 -16.68	39.44 -24.64	44.19 -30.40	-38.65 50.75	-44.70 55.31	61.14 -52.78	65.22 -58.31	67.83 -62.33
50	19.86 -3.59	32.78 -17.12	39.86 -24.67	44.65 -30.05	-37.60 51.16	-43.09 55.73	61.64 -50.72	65.70 -55.83	68.50 -59.71
60	20.90 -4.92	33.40 -17.38	40.32 -24.55	45.12 -29.62	-36.71 51.56	-41.79 56.12	-48.83 62.09	66.13 -53.53	69.10 -56.98
70	22.29 -5.46	34.26 -17.34	40.85 -24.23	45.56 -29.06	-35.89 51.98	-40.69 56.49	-47.10 62.50	66.51 -51.50	69.63 -54.96
80	23.68 -5.69	35.09 -17.14	41.39 -23.80	46.01 -28.46	-35.16 52.39	-39.70 56.86	-45.76 62.88	66.86 -50.01	70.05 -52.76
90	24.64 -5.86	35.58 -17.02	41.84 -23.49	46.40 -28.02	-34.47 52.76	-38.75 57.20	-44.72 63.22	-48.43 67.17	70.29 -51.24
100	24.96 -6.12	35.83 -17.09	42.13 -23.41	46.70 -27.81	-34.03 53.09	-38.16 57.50	-43.83 63.53	-47.42 67.43	70.49 -50.32
110	24.74 -6.41	35.89 -17.31	42.30 -23.55	46.91 -27.86	-33.93 53.36	-37.95 57.76	-43.42 63.79	-46.92 67.64	-49.81 70.63
120	24.23 -6.53	35.85 -17.55	42.40 -23.80	47.07 -28.08	-34.11 53.57	-38.07 57.97	-43.46 63.98	-46.89 67.76	-49.71 70.71
130	23.63 -6.38	35.76 -17.72	42.43 -24.11	47.16 -28.43	-34.55 53.72	-38.50 58.09	-43.92 64.05	-47.29 67.78	70.69 -50.12
140	22.94 -6.01	35.59 -17.89	42.36 -24.52	47.13 -28.96	-35.20 53.71	-39.29 58.08	-44.85 63.99	-48.16 67.67	70.57 -50.79
150	21.99 -5.72	35.21 -18.27	42.07 -25.17	46.90 -29.82	-36.01 53.50	-40.35 57.86	-45.85 63.72	-49.61 67.38	70.33 -51.97
160	20.71 -5.90	34.36 -19.14	41.47 -26.06	46.40 -30.85	-37.23 53.01	-41.60 57.41	-47.29 63.22	66.92 -51.08	69.93 -53.82
170	18.75 -6.79	33.04 -20.49	40.55 -27.43	45.59 -32.29	-38.96 52.20	-43.35 56.68	-49.32 62.46	66.26 -53.02	69.05 -55.88

• REFER TO FIGURE 13 (RM 63 TMP-2)

*Table 27. Constant Magnetic Field Intensity, B(Gauss), at
Altitude 1600 Kilometers

LONG (DEG)	B=0.15 LAT (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)
-180	0.	29.81	49.15	-48.20
	0.	-12.45	-29.32	75.02
	0.	0.	0.	-88.40
-170	0.	28.47	48.18	74.43
	0.	-15.31	-32.33	-51.99
	0.	0.	0.	-87.97
-160	0.	26.44	46.25	73.25
	0.	-18.14	-35.45	-56.20
	0.	0.	0.	-87.49
-150	0.	24.05	43.54	71.03
	0.	-21.20	-38.79	-61.20
	0.	0.	0.	-86.96
-140	0.	21.61	40.38	67.99
	0.	-24.42	-42.42	-67.50
	0.	0.	0.	-86.34
-130	0.	19.32	37.21	63.83
	0.	-27.83	-46.42	-75.71
	0.	0.	0.	-85.54
-120	0.	17.19	34.26	59.32
	0.	-31.61	-50.85	0.
-110	0.	15.36	31.81	55.52
	0.	-35.85	-55.57	0.
-100	0.	13.78	29.89	53.32
	0.	-40.54	-60.16	0.
-90	0.	12.70	28.81	52.97
	0.	-45.32	-64.20	0.
-80	-10.50	12.38	28.78	55.04
	-23.55	-49.65	-67.47	0.

* REFER TO FIGURE 14 (RM 63 TMP-2)

*Table 27 (Cont.)

LONG (DEG)	B=C.15 LAT (DEG)	B=C.20 LAT (DEG)	B=C.25 LAT (DEG)	B=C.30 LAT (DEG)
-70	-7.64 -30.57	13.14 -53.14	30.13 -69.92	61.46 C.
-60	-4.81 -34.90	15.17 -55.79	33.09 -71.78	71.96 C.
-50	-2.05 -37.09	18.27 -57.60	37.13 -73.07	79.37 C.
-40	1.05 -37.64	21.89 -58.72	41.43 -73.91	82.59 C.
-30	3.72 -36.34	25.25 -59.20	45.16 -74.38	84.05 C.
-20	5.56 -32.48	27.84 -59.08	48.09 -74.52	84.80 C.
-10	5.84 -24.65	29.53 -58.33	49.91 -74.33	85.38 C.
-0	3.55 -11.77	30.34 -56.95	50.84 -73.78	85.75 C.
10	0. 0.	30.32 -54.89	50.81 -72.83	85.88 C.
20	0. 0.	29.50 -51.60	49.88 -71.39	85.81 C.
30	0. 0.	27.97 -46.86	48.24 -69.27	85.55 C.
40	0. C.	25.97 -39.83	45.92 -66.23	85.09 C.
50	0. 0.	23.74 -30.10	43.37 -61.74	84.47 C.
60	C. C.	21.63 -20.50	40.92 -54.93	83.37 C.
70	0. 0.	19.84 -12.49	38.94 -44.61	81.19 C.

* REFER TO FIGURE 14 (RM 63 TMP-2)

*Table 27 (Cont.)

LONG (DEG)	R=C.15 LAT (DEG)	R=C.20 LAT (DEG)	R=C.25 LAT (DEG)	R=C.30 LAT (DEG)
80	0.	18.04	37.57	76.61
	0.	-6.28	-33.26	C.
90	0.	16.73	36.80	69.96
	0.	-1.92	-25.64	-62.79
	0.	C.	C.	-86.17
100	0.	16.18	36.70	-48.04
	0.	0.05	-21.62	67.47
	0.	0.	0.	-87.16
110	0.	16.69	37.37	-40.74
	0.	0.49	-19.79	67.47
	0.	0.	0.	-87.94
120	0.	18.45	38.88	-37.80
	0.	-0.41	-19.29	69.02
	0.	0.	0.	-88.53
130	0.	21.12	41.16	-36.98
	0.	-1.66	-19.58	71.24
	0.	0.	0.	-88.94
140	0.	24.10	43.80	-37.57
	0.	-3.29	-20.47	73.21
	0.	0.	0.	-89.15
150	0.	26.88	46.29	-39.16
	0.	-5.27	-21.94	74.36
	0.	0.	0.	-89.18
160	0.	28.98	48.15	-41.67
	0.	-7.32	-23.98	74.97
	0.	0.	0.	-89.04
170	0.	30.03	49.13	-44.67
	0.	-9.88	-26.51	75.30
	0.	0.	C.	-88.76

* REFER TO FIGURE 14 (RM 63 TMP-2)

*Table 28. Constant Magnetic Shell Parameter, L (Earth Radii), at Altitude 1600 Kilometers

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	12.63 -4.64	30.07 -20.67	37.94 -28.11	43.32 -33.21	-40.24 50.49	-44.93 55.21	61.06 -50.91	65.11 -55.10	67.60 -57.80
-170	10.47 -5.91	28.00 -22.36	36.24 -30.13	41.68 -35.27	48.96 -42.11	-46.84 53.67	59.95 -53.12	63.66 -57.25	66.39 -60.48
-160	7.89 -7.05	26.05 -24.24	34.38 -31.88	40.00 -37.12	47.10 -44.35	-49.15 51.89	58.08 -55.61	62.00 -60.02	65.12 -62.97
-150	5.75 -8.13	24.13 -25.95	32.29 -33.83	37.81 -39.21	45.27 -46.41	50.13 -51.34	56.19 -57.92	60.34 -62.32	63.02 -65.71
-140	3.23 -9.02	22.14 -27.52	30.43 -35.71	35.83 -41.14	43.02 -48.57	47.81 -53.62	54.17 -60.44	58.08 -65.03	61.01 -68.17
-130	0.92 -9.36	20.45 -29.18	28.39 -37.43	33.78 -43.07	40.93 -50.74	45.72 -55.85	51.81 -62.59	55.91 -67.10	58.82 -70.58
-120	-2.38 -9.54	18.52 -30.72	26.47 -39.31	31.73 -45.13	38.82 -52.70	43.48 -57.89	49.82 -64.91	53.65 -69.29	56.47 -72.42
-110	0. 0.	16.62 -32.12	24.68 -41.01	29.95 -46.83	36.73 -54.78	41.40 -59.99	47.47 -66.52	51.47 -70.95	54.54 -74.18
-100	0. 0.	14.75 -33.62	22.58 -42.60	27.85 -48.55	35.04 -56.32	39.68 -61.41	45.73 -68.00	49.86 -72.23	52.46 -75.47
-90	0. 0.	12.42 -35.05	20.76 -44.07	26.11 -50.09	33.22 -57.63	37.97 -62.66	44.32 -69.27	48.24 -73.30	51.16 -76.26
-80	0. 0.	10.45 -35.81	19.10 -45.14	24.82 -50.96	32.06 -58.61	36.97 -63.59	43.40 -70.14	47.48 -74.10	50.59 -76.85
-70	0. 0.	8.79 -35.99	18.05 -45.48	24.06 -51.37	31.74 -59.13	36.83 -64.11	43.44 -70.50	47.61 -74.59	50.74 -77.21
-60	0. 0.	8.50 -35.37	18.33 -45.17	24.64 -51.20	32.50 -59.09	37.71 -64.16	44.57 -70.59	48.73 -74.75	51.68 -77.33
-50	0. 0.	10.35 -33.57	20.28 -43.92	26.38 -50.40	34.48 -58.47	39.72 -63.70	46.22 -70.39	50.56 -74.55	53.49 -77.22
-40	0. 0.	13.72 -30.92	23.21 -41.81	29.25 -48.68	36.89 -57.27	41.94 -62.76	48.49 -69.84	52.59 -74.00	55.69 -76.87
-30	0. 0.	17.72 -27.45	26.64 -38.97	32.25 -46.24	39.81 -55.58	44.67 -61.37	50.89 -68.68	55.12 -73.13	57.77 -76.28
-20	0. 0.	21.53 -23.87	30.03 -35.51	35.31 -43.11	42.20 -53.07	46.90 -59.52	53.05 -67.17	57.00 -71.96	60.13 -75.47
-10	0. 0.	24.90 -20.58	32.54 -31.81	37.64 -39.71	44.58 -50.21	49.09 -56.87	55.21 -65.42	59.03 -70.55	61.73 -74.12

• REFER TO FIGURE 14 (RM 63 TMP-2)

*Table 28 (Cont.)

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	C. C.	27.17 -17.84	34.87 -28.59	39.78 -36.23	46.27 -46.84	50.81 -54.02	56.67 -62.91	60.67 -68.47	63.40 -72.25
10	C. C.	29.05 -16.03	36.26 -26.11	41.12 -33.36	47.64 -43.77	52.09 -50.96	58.03 -60.32	61.89 -66.04	65.01 -70.25
20	C. C.	30.26 -15.15	37.26 -24.55	42.09 -31.33	48.74 -41.19	-48.11 53.19	59.24 -57.31	63.01 -63.27	65.90 -67.46
30	12.54 4.57	30.77 -15.07	37.89 -23.80	42.77 -30.21	49.59 -39.33	-45.82 54.07	60.18 -54.72	64.01 -60.51	66.74 -64.79
40	14.85 2.45	31.06 -15.41	38.31 -23.58	43.27 -29.57	-37.93 50.19	-43.99 54.79	60.76 -52.15	64.89 -57.66	67.49 -61.72
50	15.93 -0.09	31.42 -15.82	38.74 -23.59	43.74 -29.15	-36.93 50.60	-42.46 55.28	61.27 -50.21	65.41 -55.33	68.17 -59.06
60	17.49 -1.42	32.03 -16.09	39.32 -23.48	44.27 -28.72	-36.08 51.01	-41.23 55.68	-48.25 61.72	65.85 -52.98	68.77 -56.50
70	19.57 -2.36	32.86 -16.09	40.02 -23.18	44.86 -28.20	-35.31 51.42	-40.20 56.06	-46.62 62.14	66.24 -51.08	69.31 -54.43
80	21.01 -2.87	33.69 -15.92	40.55 -22.79	45.34 -27.64	-34.50 51.83	-39.08 56.42	-45.37 62.52	-49.53 66.59	69.78 -52.37
90	21.89 -3.22	34.32 -15.83	40.98 -22.52	45.72 -27.23	-33.79 52.20	-38.19 56.76	-44.23 62.86	-48.03 66.90	70.10 -50.95
100	22.21 -3.59	34.65 -15.90	41.26 -22.43	46.01 -27.03	-33.38 52.52	-37.64 57.06	-43.39 63.17	-47.08 67.15	70.30 -50.09
110	22.03 -3.91	34.73 -16.09	41.42 -22.55	46.21 -27.07	-33.27 52.78	-37.44 57.30	-43.00 63.41	-46.62 67.35	-49.45 70.44
120	21.56 -3.97	34.65 -16.28	41.49 -22.77	46.34 -27.26	-33.43 52.96	-37.54 57.48	-43.04 63.57	-46.59 67.46	-49.36 70.50
130	20.97 -3.65	34.50 -16.41	41.50 -23.04	46.41 -27.58	-33.84 53.08	-37.94 57.58	-43.47 63.63	-46.97 67.47	-49.86 70.48
140	20.27 -3.02	34.24 -16.54	41.40 -23.41	46.36 -28.07	-34.54 53.05	-38.69 57.55	-44.36 63.54	-47.81 67.33	70.34 -50.56
150	18.96 -2.45	33.72 -16.86	41.10 -24.06	46.11 -28.87	-35.44 52.81	-39.87 57.32	-45.50 63.25	-49.19 67.04	70.10 -51.69
160	17.18 -2.40	32.82 -17.63	40.51 -25.14	45.61 -30.10	-36.59 52.32	-41.09 56.85	-46.87 62.75	66.57 -50.77	69.53 -53.46
170	15.28 -3.12	31.58 -18.99	39.48 -26.40	44.75 -31.44	-38.22 51.53	-42.75 56.14	-48.81 62.01	65.92 -52.62	68.66 -55.61

* REFER TO FIGURE 14 (RM 63 TMP-2)

*Table 29. Constant Magnetic Field Intensity, B
(Gauss), at Altitude 1800 Kilometers

LONG (DEG)	B=0.15 LAT (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)
-180	0. 0.	35.87 -18.22	-36.16 56.55	C. C.
-170	0. 0.	34.68 -21.03	-39.31 55.67	C. C.
-160	0. 0.	32.65 -23.94	-42.71 53.96	C. C.
-150	0. 0.	30.19 -27.01	-46.33 51.46	C. C.
-140	0. 0.	27.53 -30.30	-48.34 -50.30	C. C.
-130	0. 0.	25.01 -33.81	-44.93 -54.77	C. C.
-120	0. 0.	22.66 -37.71	-41.85 -59.62	C. C.
-110	-4.19 -14.36	20.66 -42.03	39.16 -64.48	C. C.
-100	-3.57 -20.57	19.01 -46.61	37.29 -68.84	0. C.
-90	-3.12 -26.52	17.92 -51.06	36.33 -72.36	C. C.
-80	-2.41 -32.17	17.66 -54.96	36.66 -74.92	C. C.
-70	-1.09 -36.85	18.52 -58.06	38.55 -76.89	C. C.
-60	0.95 -40.29	20.67 -60.41	42.04 -78.24	0. C.
-50	3.69 -42.23	23.89 -62.04	46.51 -79.15	C. 0.
-40	6.84 -42.97	27.56 -63.06	51.02 -79.73	C. C.
-30	9.90 -42.41	30.93 -63.55	54.80 -80.05	C. C.
-20	12.09 -40.48	33.55 -63.53	57.71 -80.14	C. C.
-10	13.41 -36.46	35.29 -62.99	59.49 -79.98	C. C.

* REFER TO FIGURE 15 (RM 63 TMP-2)

*Table 29 (Cont.)

LONG (DEG)	B=C.15 LAT (DEG)	B=C.20 LAT (DEG)	B=C.25 LAT (DEG)	B=C.30 LAT (DEG)
-0	13.72 -29.70	36.18 -61.90	60.40 -79.59	0. C.
10	12.86 -20.18	36.24 -60.23	60.47 -78.91	C. C.
20	10.87 -11.48	35.52 -57.62	59.73 -77.85	C. C.
30	6.33 -3.56	34.13 -53.98	58.27 -76.26	0. C.
40	0. 0.	32.27 -48.61	56.03 -73.92	C. C.
50	0. 0.	30.23 -40.80	53.34 -70.46	C. C.
60	0. 0.	28.31 -37.91	50.49 -65.24	C. C.
70	0. 0.	26.76 -21.85	48.13 -57.21	0. C.
80	0. C.	25.63 -15.16	46.32 -46.04	C. C.
90	0. 0.	24.95 -10.83	45.24 -36.03	C. C.
100	0. 0.	24.77 -8.49	45.03 -30.12	C. C.
110	0. 0.	25.29 -7.68	45.77 -27.31	C. C.
120	0. 0.	26.55 -7.83	47.38 -26.18	-56.77 -69.89
130	0. 0.	28.58 -8.56	49.53 -26.15	-51.73 -74.32
140	0. 0.	31.05 -9.74	-26.94 52.03	-51.14 -75.98
150	0. 0.	33.38 -11.24	-28.42 54.17	-52.79 -76.50
160	0. 0.	35.20 -13.20	-30.54 55.73	-55.75 -76.27
170	0. 0.	36.05 -15.61	-33.20 56.56	-60.11 -75.18

* REFER TO FIGURE 15 (RM 63 TMP-2)

*Table 30. Constant Magnetic Shell Parameter, L (Earth Radii), at Altitude 1800 Kilometers

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	C. C.	28.37 -19.11	36.82 -27.00	42.36 -32.29	49.84 -39.53	-44.25 54.57	60.65 -50.52	64.68 -54.69	67.24 -57.45
-170	C. C.	26.45 -20.86	35.21 -28.92	40.81 -34.33	48.17 -41.43	-46.28 53.00	59.36 -52.63	63.19 -56.86	66.07 -60.19
-160	C. C.	24.53 -22.57	33.15 -30.83	38.93 -36.24	46.39 -43.56	-48.49 51.30	57.56 -55.20	61.59 -59.53	64.71 -62.58
-150	C. C.	22.45 -24.41	31.18 -32.64	36.86 -38.21	44.51 -45.75	-49.45 50.79	55.75 -57.41	60.00 -61.89	62.61 -65.37
-140	C. C.	20.62 -25.97	29.25 -34.62	35.00 -40.30	42.26 -47.81	-47.17 52.96	53.60 -60.01	57.62 -64.50	60.69 -67.72
-130	C. C.	18.73 -27.47	27.21 -36.32	32.78 -42.11	40.29 -50.09	-45.19 55.30	51.35 -62.06	55.55 -66.64	58.39 -70.20
-120	C. C.	16.83 -29.05	25.41 -38.05	30.85 -44.09	38.04 -51.95	-42.84 57.22	49.24 -64.26	53.20 -68.73	56.15 -71.97
-110	C. C.	15.09 -30.52	23.37 -39.93	28.87 -45.91	36.06 -53.90	-40.85 59.21	47.00 -66.00	51.11 -70.52	54.12 -73.65
-100	C. C.	12.85 -31.84	21.42 -41.40	26.90 -47.51	34.22 -55.59	-39.00 60.79	45.34 -67.41	49.40 -71.74	52.13 -75.10
-90	C. C.	10.74 -33.07	19.63 -42.74	25.27 -48.95	32.49 -56.82	-37.37 61.96	43.81 -68.61	47.84 -72.75	50.88 -75.85
-80	C. C.	8.54 -33.90	17.83 -43.74	23.76 -50.03	31.39 -57.73	-36.42 62.83	42.92 -69.50	47.10 -73.51	50.32 -76.41
-70	C. C.	6.87 -34.04	16.84 -44.12	23.04 -50.39	31.07 -58.20	-36.27 63.30	42.94 -70.01	47.21 -73.97	50.45 -76.75
-60	C. C.	6.54 -33.19	17.06 -43.71	23.55 -50.20	31.76 -58.14	-37.08 63.33	43.99 -70.08	48.26 -74.10	51.33 -76.86
-50	C. C.	8.14 -31.43	18.89 -42.46	25.43 -49.23	33.60 -57.53	-38.96 62.88	45.75 -69.81	50.19 -73.90	53.04 -76.74
-40	C. C.	11.54 -28.73	21.84 -40.48	28.09 -47.47	36.12 -56.38	-41.29 61.96	47.89 -69.07	52.11 -73.36	55.34 -76.39
-30	C. C.	15.68 -25.44	25.39 -37.50	31.21 -45.17	38.87 -54.69	-43.88 60.63	50.41 -67.94	54.58 -72.50	57.31 -75.81
-20	C. C.	19.60 -21.80	28.54 -34.12	34.19 -41.95	41.41 -52.10	-46.25 58.58	52.47 -66.49	56.53 -71.37	59.66 -75.01
-10	C. C.	22.73 -18.65	31.28 -30.58	36.62 -38.53	43.69 -49.23	-48.35 56.07	54.66 -64.72	58.49 -70.01	61.33 -73.43

* REFER TO FIGURE 15 (RM 63 TMP-2)

*Table 30 (Cont.)

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	C. Q.	25.46 -16.12	33.47 -27.37	38.65 -35.28	45.58 -46.00	50.25 -53.14	56.19 -62.16	60.30 -67.74	62.95 -71.62
10	C. C.	27.19 -14.43	35.20 -25.08	40.27 -32.41	46.90 -42.93	51.50 -50.25	57.51 -59.59	61.48 -65.43	64.53 -69.57
20	C. Q.	28.44 -13.50	36.17 -23.43	41.21 -30.51	47.98 -40.49	47.37 52.56	58.70 -56.63	62.58 -62.56	65.60 -66.80
30	C. C.	29.16 -13.42	36.79 -22.73	41.88 -29.34	48.83 -38.57	45.21 53.44	59.73 -54.00	63.57 -59.94	66.42 -64.05
40	C. Q.	29.61 -13.87	37.22 -22.53	42.39 -28.66	49.50 -37.23	43.31 54.16	60.40 -51.57	64.45 -57.06	67.17 -61.16
50	Q. C.	30.11 -14.42	37.65 -22.53	42.86 -28.26	36.28 50.06	41.86 54.78	49.65 60.90	65.14 -54.81	67.85 -58.46
60	12.14 3.79	30.71 -14.77	38.23 -22.44	43.39 -27.85	35.49 50.47	40.70 55.25	47.71 61.36	65.57 -52.47	68.45 -56.05
70	15.55 1.65	31.51 -14.83	38.93 -22.17	43.98 -27.36	34.68 50.88	39.62 55.63	46.18 61.78	65.96 -50.69	68.99 -53.94
80	17.37 0.39	32.31 -14.65	39.62 -21.83	44.57 -26.85	33.80 51.29	38.49 55.99	45.00 62.16	49.06 66.31	69.46 -52.00
90	18.73 -0.24	32.91 -14.57	40.14 -21.58	45.05 -26.47	33.14 51.65	37.65 56.32	43.76 62.50	47.65 66.62	69.86 -50.67
100	19.26 -0.60	33.22 -14.66	40.42 -21.49	45.33 -26.28	32.74 51.96	37.13 56.61	42.96 62.80	46.76 66.88	49.79 70.11
110	19.02 -0.81	33.29 -14.89	40.57 -21.59	45.52 -26.31	32.64 52.20	36.94 56.85	42.60 63.03	46.32 67.06	49.11 70.24
120	18.32 -0.75	33.21 -15.07	40.62 -21.78	45.64 -26.48	32.78 52.37	37.03 57.01	42.63 63.18	46.30 67.17	49.02 70.30
130	17.38 -0.34	33.03 -15.17	40.61 -22.02	45.69 -26.77	33.16 52.46	37.41 57.09	43.04 63.22	46.66 67.15	49.51 70.26
140	16.25 0.65	32.75 -15.26	40.48 -22.35	45.61 -27.22	33.81 52.41	38.12 57.04	43.89 63.11	47.46 67.01	70.12 -50.34
150	14.76 1.98	32.22 -15.53	40.17 -22.94	45.35 -27.96	34.85 52.16	39.24 56.79	45.16 62.82	48.79 66.71	69.78 -51.42
160	11.83 2.99	31.37 -16.20	39.44 -23.98	44.79 -29.15	35.98 51.66	40.60 56.32	46.47 62.30	66.24 -50.48	69.14 -53.12
170	8.02 3.69	30.20 -17.40	38.28 -25.42	43.73 -30.63	37.52 50.89	42.17 55.62	48.32 61.57	65.59 -52.25	68.28 -55.34

* REFER TO FIGURE 15 (RM 63 TMP-2)

*Table 31. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 2000 Kilometers

LONG (DEG)	B=0.15 LAT (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	LONG (DEG)	B=0.15 LAT (DEG)	B=0.20 LAT (DEG)	B=0.25 LAT (DEG)
-180	13.00 1.88	41.76 -23.82	-44.25 66.21	-0	19.96 -40.13	42.42 -66.86	72.84 -87.17
-170	12.54 -1.74	40.67 -26.68	-47.81 65.39	10	19.85 -34.22	42.53 -65.46	73.02 -87.12
-160	11.41 -5.37	38.75 -29.68	64.00 -51.67	20	18.82 -26.64	41.89 -63.33	72.69 -86.85
-150	10.16 -8.59	36.26 -32.85	61.86 -55.98	30	17.02 -19.51	40.56 -60.36	71.79 -85.72
-140	8.50 -12.09	33.50 -36.26	58.91 -60.97	40	14.67 -13.42	38.77 -56.04	70.20 -84.16
-130	7.10 -15.85	30.77 -39.95	55.44 -66.66	50	11.16 -6.99	36.78 -49.84	68.06 -82.32
-120	5.91 -19.74	28.27 -44.03	52.11 -72.56	60	0. 0.	34.87 -41.11	65.08 -78.86
-110	4.84 -23.84	26.12 -48.44	49.14 -77.70	70	0. 0.	33.34 -31.35	62.15 -72.84
-100	3.80 -28.48	24.43 -52.91	47.25 -81.29	80	0. 0.	32.24 -23.51	59.42 -62.89
-90	3.24 -33.41	23.39 -57.04	46.57 -83.55	90	0. 0.	31.61 -18.38	57.84 -50.37
-80	3.30 -38.11	23.24 -60.52	47.59 -84.82	100	0. 0.	31.52 -15.52	-41.25 57.27
-70	4.23 -42.05	24.27 -63.27	50.40 -85.90	110	0. 0.	32.06 -14.26	-36.46 57.82
-60	6.09 -45.02	26.62 -65.32	54.99 -86.41	120	0. 0.	33.31 -14.02	-34.30 59.21
-50	8.82 -46.79	29.94 -66.76	60.31 -86.69	130	0. 0.	35.22 -14.46	-33.82 61.22
-40	12.02 -47.60	33.68 -67.68	64.92 -86.86	140	0. 0.	37.44 -15.40	-34.41 63.22
-30	15.15 -47.45	37.06 -68.14	68.42 -86.98	150	0. 0.	39.55 -16.83	-35.95 64.71
-20	17.53 -46.29	39.67 -68.16	70.65 -87.07	160	0. 0.	41.14 -18.77	-38.24 65.83
-10	19.16 -43.94	41.48 -67.74	72.10 -87.14	170	11.31 6.94	41.92 -21.16	-41.05 66.34

* REFER TO FIGURE 16 (RM 63 TMP-2)

*Table 32. Constant Magnetic Shell Parameter, L (Earth Radii), at Altitude 2000 Kilometers

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-180	C. 26.73 C. -17.39	35.75 -25.94	41.46 -31.42	49.01 -38.75	-43.60 53.88	60.25 -50.14	64.20 -54.23	66.90 -57.11	
-170	C. 24.95 C. -19.23	33.98 -27.72	39.98 -33.33	47.41 -40.79	-45.75 52.37	58.79 -52.16	62.75 -56.48	65.76 -59.85	
-160	C. 22.75 C. -20.98	31.98 -29.76	37.92 -35.40	45.72 -42.82	-47.86 50.74	57.06 -54.72	61.21 -59.05	64.25 -62.20	
-150	C. 20.84 C. -22.60	30.14 -31.51	35.97 -37.26	43.69 -45.12	-48.75 50.26	55.33 -56.93	59.47 -61.48	62.23 -65.04	
-140	C. 18.88 C. -24.31	28.00 -33.35	33.93 -39.33	41.55 -47.08	-46.57 52.33	53.06 -59.42	57.19 -63.99	60.37 -67.30	
-130	C. 16.94 C. -25.83	26.08 -35.25	31.83 -41.20	39.54 -49.28	-44.54 54.67	50.91 -61.56	55.21 -66.21	57.98 -69.77	
-120	C. 15.22 C. -27.21	24.18 -36.86	30.01 -43.06	37.29 -51.23	-42.22 56.59	48.70 -63.66	52.77 -68.21	55.84 -71.54	
-110	C. 13.10 C. -28.66	22.14 -38.59	27.85 -45.03	35.42 -53.07	-40.33 58.48	46.56 -65.52	50.77 -70.11	53.71 -73.15	
-100	C. 11.06 C. -30.14	20.32 -40.27	25.99 -46.52	33.43 -54.88	-38.34 60.20	44.95 -66.86	48.95 -71.27	51.81 -74.59	
-90	C. 8.80 C. -31.17	18.28 -41.48	24.26 -47.85	31.79 -56.06	-36.79 61.30	43.31 -67.99	47.45 -72.24	50.61 -75.47	
-80	C. 6.55 C. -31.82	16.61 -42.37	22.74 -48.84	30.74 -56.90	-35.88 62.11	42.46 -68.83	46.74 -72.96	50.07 -76.00	
-70	C. 5.04 C. -31.84	15.67 -42.69	22.06 -49.27	30.43 -57.33	-35.73 62.55	42.46 -69.31	46.83 -73.38	50.18 -76.32	
-60	C. 4.52 C. -31.02	15.84 -42.28	22.51 -49.01	31.06 -57.26	-36.48 62.56	43.45 -69.40	47.81 -73.50	51.00 -76.42	
-50	C. 5.92 C. -29.18	17.48 -41.08	24.37 -48.00	32.77 -56.66	-38.24 62.11	45.31 -69.08	49.74 -73.29	52.61 -76.29	
-40	C. 9.26 C. -26.35	20.54 -39.00	26.99 -46.34	35.39 -55.55	-40.67 61.22	47.33 -68.36	51.65 -72.76	55.00 -75.94	
-30	C. 13.25 C. -23.00	23.92 -36.10	30.23 -43.92	37.99 -53.65	-43.12 59.91	49.92 -67.26	54.00 -71.92	56.88 -75.37	
-20	C. 17.17 C. -19.70	27.12 -32.65	33.03 -40.85	40.67 -51.20	-45.63 57.71	51.92 -65.86	56.10 -70.82	59.13 -74.34	
-10	C. 20.70 C. -16.57	30.10 -29.25	35.66 -37.41	42.84 -48.25	-47.65 55.33	54.02 -63.91	57.98 -69.25	60.96 -72.79	

* REFER TO FIGURE 16 (RM 63 IMP-2)

*Table 32 (Cont.)

LONG (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)	L=6.00 LAT (DEG)
-0	0. C.	23.33 -14.25	32.15 -26.17	37.59 -34.23	44.89 -45.20	49.60 -52.32	55.73 -61.46	59.91 -67.07	62.52 -71.05
10	C. 0.	25.45 -12.55	33.86 -23.85	39.23 -31.48	46.20 -42.12	-49.47 50.93	57.01 -58.79	61.09 -64.81	64.06 -68.84
20	C. C.	26.61 -11.81	35.12 -22.33	40.36 -29.63	47.25 -39.77	-46.67 51.96	58.17 -55.99	62.17 -61.90	65.30 -66.20
30	C. 0.	27.32 -11.78	35.73 -21.67	41.03 -28.42	48.09 -37.83	-44.53 52.83	59.19 -53.32	63.15 -59.23	66.11 -63.38
40	0. C.	27.81 -12.23	36.17 -21.51	41.53 -27.77	48.76 -36.56	-42.67 53.55	60.05 -51.02	64.02 -56.51	66.86 -60.64
50	C. 0.	28.37 -12.77	36.61 -21.50	42.01 -27.39	49.35 -35.65	-41.28 54.17	-49.03 60.55	64.79 -54.22	67.54 -57.91
60	0. 0.	29.21 -13.12	37.18 -21.43	42.54 -27.01	49.92 -34.88	-40.18 54.75	-47.20 61.01	65.30 -52.00	68.14 -55.64
70	C. C.	30.21 -13.21	37.86 -21.19	43.12 -26.55	-33.95 50.36	-38.99 55.21	-45.75 61.43	65.70 -50.32	68.68 -53.48
80	10.64 8.48	30.97 -13.11	38.54 -20.89	43.70 -26.09	-33.13 50.76	-37.92 55.57	-44.48 61.81	-48.62 66.05	69.15 -51.64
90	13.41 4.72	31.54 -13.04	39.09 -20.67	44.19 -25.73	-32.50 51.12	-37.13 55.89	-43.30 62.15	-47.28 66.35	69.55 -50.40
100	14.73 4.12	31.85 -13.13	39.45 -20.59	44.56 -25.56	-32.13 51.41	-36.64 56.18	-42.55 62.44	-46.44 66.60	-49.41 69.86
110	14.41 3.94	31.91 -13.31	39.64 -20.67	44.81 -25.58	-32.03 51.64	-36.46 56.40	-42.21 62.66	-46.04 66.78	-48.78 70.04
120	13.05 4.31	31.81 -13.49	39.70 -20.84	44.95 -25.73	-32.16 51.80	-36.54 56.56	-42.23 62.80	-46.02 66.87	-48.70 70.09
130	11.09 6.42	31.61 -13.58	39.65 -21.04	44.98 -25.99	-32.51 51.87	-36.90 56.61	-42.63 62.82	-46.36 66.85	-49.16 70.05
140	0. C.	31.31 -13.67	39.46 -21.34	44.86 -26.40	-33.12 51.80	-37.57 56.54	-43.44 62.69	-47.13 66.70	69.85 -50.12
150	C. 0.	30.79 -13.97	39.03 -21.88	44.49 -27.09	-34.10 51.53	-38.63 56.28	-44.75 62.39	-48.40 66.39	69.41 -51.16
160	C. 0.	29.98 -14.77	38.25 -22.82	43.80 -28.20	-35.39 51.03	-40.14 55.82	-46.08 61.88	65.92 -50.19	68.77 -52.78
170	C. C.	28.47 -15.89	37.13 -24.29	42.77 -29.81	-36.84 50.28	-41.62 55.13	-47.85 61.15	65.28 -51.89	67.92 -55.09

• REFER TO FIGURE 16 (RM 63 TMP-2)

*Table 33. Constant Magnetic Field Intensity, B(Gauss), in the Region of the South Atlantic Anomaly at Altitude 0 Kilometers

LONG (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0.	0.	0.	0.
-170	0.	0.	0.	0.
-160	0.	0.	0.	0.
-150	0.	0.	0.	0.
-140	0.	0.	0.	0.
-130	0.	0.	0.	0.
-120	0.	0.	0.	0.
-110	0.	0.	0.	0.
-100	0.	0.	0.	0.
-90	0.	0.	0.	0.
-80	0.	0.	0.	-19.96
	0.	0.	0.	-20.06
-70	0.	0.	0.	-11.65
	0.	0.	0.	-35.48
-60	0.	-20.78	-14.84	-8.55
	0.	-30.16	-35.58	-41.61
-50	-24.95	-16.32	-11.98	-5.69
	-25.21	-36.11	-40.07	-45.21
-40	0.	-16.36	-10.63	-3.19
	0.	-37.08	-41.35	-46.74
-30	0.	0.	-13.87	-1.81
	0.	0.	-40.26	-46.97
-20	0.	0.	0.	-4.09
	0.	0.	0.	-45.82

* REFER TO FIGURE 17 (RM 63 TMP-2)

*Table 33 (Cont.)

LONG (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=C.28 LAT (DEG)
-10	0. 0.	0. 0.	0. 0.	-30.22 -41.07
0	0.	0.	0.	0.
10	0.	0.	0.	0.
20	0.	0.	0.	0.
30	0.	0.	0.	0.
40	0.	0.	0.	0.
50	0.	0.	0.	0.
60	0.	0.	0.	0.
70	0.	0.	0.	0.
80	0.	0.	0.	0.
90	0.	0.	0.	0.
100	0.	0.	0.	0.
110	0.	0.	0.	0.
120	0.	0.	0.	0.
130	0.	0.	0.	0.
140	0.	0.	0.	0.
150	0.	0.	0.	0.
160	0.	0.	0.	0.
170	0.	0.	0.	0.

* REFER TO FIGURE 17 (RM 63 TMP-2)

*Table 34. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 100 Kilometers

LONG (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0.	0.	0.	0.
-170	0.	0.	0.	0.
-160	0.	0.	0.	0.
-150	0.	0.	0.	0.
-140	0.	0.	0.	0.
-130	0.	0.	0.	0.
-120	0.	0.	0.	0.
-110	0.	0.	0.	0.
-100	0.	0.	0.	0.
-90	0.	0.	0.	0.
-80	0.	0.	0.	-10.02
	0.	0.	0.	-30.31
-70	0.	0.	-14.63	-7.73
	0.	0.	-31.26	-38.67
-60	-21.00	-14.45	-10.72	-5.14
	-28.46	-35.18	-38.64	-43.96
-50	-16.05	-11.42	-7.93	-2.36
	-35.31	-39.39	-42.31	-47.06
-40	-15.78	-9.77	-5.60	0.79
	-36.04	-40.74	-43.93	-48.74
-30	0.	-12.20	-4.99	3.19
	0.	-39.25	-43.56	-49.26
-20	0.	0.	-12.42	3.83
	0.	0.	-40.49	-48.55

* REFER TO FIGURE 18 (RM 63 TMP-2)

*Table 34 (Cont.)

LONG (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=C.26 LAT (DEG)	B=C.28 LAT (DEG)
-10	0.	0.	0.	0.33
	0.	0.	0.	-46.54
0	0.	0.	0.	-35.65
	0.	0.	0.	-40.52
10	0.	0.	0.	0.
20	0.	0.	0.	0.
30	0.	0.	0.	0.
40	0.	0.	0.	0.
50	0.	0.	0.	0.
60	0.	0.	0.	0.
70	0.	0.	0.	0.
80	0.	0.	0.	0.
90	0.	0.	0.	0.
100	0.	0.	0.	0.
110	0.	0.	0.	0.
120	0.	0.	0.	0.
130	0.	0.	0.	0.
140	0.	0.	0.	0.
150	0.	0.	0.	0.
160	0.	0.	0.	0.
170	0.	0.	0.	0.

* REFER TO FIGURE 18 (RM 63 TMP-2)

*Table 35. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 200 Kilometers

LONG (DEG)	H=0.23 LAT (DEG)	H=0.24 LAT (DEG)	H=0.25 LAT (DEG)	H=0.26 LAT (DEG)	H=0.28 LAT (DEG)
	LAT (DEG)	LAT (DEG)	LAT (DEG)	LAT (DEG)	LAT (DEG)
-180	0.	0.	0.	0.	0.
-170	0.	0.	0.	0.	0.
-160	0.	0.	0.	0.	0.
-150	0.	0.	0.	0.	0.
-140	0.	0.	0.	0.	0.
-130	0.	0.	0.	0.	0.
-120	0.	0.	0.	0.	0.
-110	0.	0.	0.	0.	0.
-100	0.	0.	0.	0.	0.
-90	0.	0.	0.	0.	-7.10
	0.	0.	0.	0.	-25.56
-80	0.	0.	0.	-14.38	-5.72
	0.	0.	0.	-25.23	-34.68
-70	0.	0.	-14.13	-9.86	-4.26
	0.	0.	-31.14	-35.58	-41.49
-60	-22.63	-14.23	-10.17	-7.23	-2.16
	-26.35	-34.42	-38.22	-41.29	-46.14
-50	-16.15	-11.06	-7.42	-4.27	0.88
	-33.92	-38.55	-41.85	-44.68	-49.05
-40	-15.66	-9.31	-4.87	-1.47	4.34
	-34.80	-40.03	-43.32	-46.16	-50.69
-30	0.	-10.94	-4.05	0.61	7.28
	0.	-37.90	-42.83	-46.26	-51.25
-20	0.	0.	-8.74	0.38	8.88
	0.	0.	-39.46	-44.99	-50.97

* REFER TO FIGURE 19 (RM 63 TMP-2)

*Table 35 (Cont.)

LONG (DEG)	R=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=C.25 LAT (DEG)	B=C.26 LAT (DEG)	B=0.28 LAT (DEG)
-10	0. 0.	0. 0.	0. 0.	-21.83 -39.81	8.41 -49.91
0	0. 0.	0. 0.	0. 0.	0. 0.	4.44 -47.17
10	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.
80	0.	0.	0.	0.	0.
90	0.	0.	0.	0.	0.
100	0.	0.	0.	0.	0.
110	0.	0.	0.	0.	0.
120	0.	0.	0.	0.	0.
130	0.	0.	0.	0.	0.
140	0.	0.	0.	0.	0.
150	0.	0.	0.	0.	0.
160	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.

* REFER TO FIGURE 19 (RM 63 TMP-2)

*Table 36. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 300 Kilometers

LONG (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	C.	C.	C.	C.	0.	0.
-170	0.	C.	C.	C.	0.	0.
-160	C.	0.	C.	C.	0.	0.
-150	0.	C.	0.	C.	0.	0.
-140	C.	0.	C.	C.	0.	0.
-130	0.	0.	C.	C.	0.	-4.05
	0.	0.	0.	C.	0.	-5.27
-120	C.	C.	0.	C.	0.	-0.76
	0.	0.	C.	C.	0.	-11.53
-110	C.	0.	C.	C.	0.	-1.28
	C.	C.	0.	C.	0.	-16.85
-100	0.	0.	C.	C.	0.	-2.01
	0.	0.	C.	C.	0.	-23.00
-90	0.	0.	0.	C.	-12.24	-2.41
	0.	0.	0.	0.	-20.14	-30.61
-80	0.	0.	C.	-13.58	-8.40	-2.23
	0.	0.	0.	-25.61	-31.13	-38.07
-70	0.	0.	-13.84	-9.42	-6.30	-1.20
	0.	0.	-30.81	-35.42	-38.73	-44.11
-60	0.	-14.23	-9.87	-6.76	-3.93	0.86
	0.	-33.37	-37.66	-40.98	-43.68	-48.24
-50	-16.73	-10.96	-7.09	-3.83	-1.01	3.93
	-32.17	-37.58	-41.27	-44.22	-46.67	-50.98
-40	-16.20	-9.11	-4.48	-0.88	2.20	7.60
	-32.50	-38.79	-42.60	-45.73	-48.21	-52.51
-30	C.	-10.23	-3.40	1.28	5.05	10.93
	0.	-36.47	-41.97	-45.75	-48.57	-53.19
-20	0.	0.	-6.62	1.44	6.19	12.91
	C.	0.	-37.80	-44.07	-47.72	-53.08

* REFER TO FIGURE 20 (RM 63 TMP-2)

*Table 36 (Cont.)

LONG (DEG)	B=0.22 LAT (DEG)	H=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	H=0.26 LAT (DEG)	H=0.28 LAT (DEG)
-10	0. C.	0. 0.	C. C.	-6.02 -37.79	5.13 -45.57	13.38 -52.22
0	0. 0.	C. 0.	0. 0.	C. 0.	-33.60 -36.34	12.24 -50.67
10	0. 0.	0. 0.	0. 0.	C. 0.	0. 0.	8.87 -47.59
20	C. 0.	0. 0.	0. 0.	0. 0.	0. 0.	-33.79 -40.86
30	0.	0.	C.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.
60	0.	0.	C.	0.	0.	0.
70	0.	0.	C.	0.	0.	0.
80	0.	0.	0.	C.	0.	0.
90	0.	0.	C.	C.	0.	0.
100	0.	0.	0.	C.	0.	0.
110	0.	0.	C.	0.	0.	0.
120	0.	0.	C.	C.	0.	0.
130	0.	0.	C.	C.	0.	0.
140	0.	0.	C.	C.	0.	0.
150	0.	0.	C.	0.	0.	0.
160	0.	0.	C.	C.	0.	0.
170	0.	0.	C.	C.	0.	0.

* REFER TO FIGURE 20 (RM 63 TMP-2)

*Table 37. Constant Magnetic Field Intensity, B(Gauss), in the Region of the South Atlantic Anomaly at Altitude 400 Kilometers

LONG (DEG)	B=0.21 LAT (DEG)	H=0.22 LAT (DEG)	H=0.23 LAT (DEG)	H=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0. C.	0. 0.	C. C.	C. C.	0. 0.	0. 0.	11.00 8.65
-170	C. 0.	0. 0.	C. C.	C. C.	0. 0.	0. 0.	10.82 3.67
-160	C. 0.	0. 0.	C. C.	C. C.	0. 0.	0. C.	9.82 -0.78
-150	0. C.	0. 0.	C. C.	C. C.	0. 0.	0. C.	8.42 -5.27
-140	0. 0.	0. 0.	C. C.	C. C.	0. 0.	0. 0.	7.36 -9.51
-130	C. 0.	0. 0.	C. C.	C. C.	0. 0.	0. C.	6.28 -13.57
-120	C. 0.	0. 0.	C. C.	C. C.	0. 0.	C. 0.	5.13 -17.68
-110	0. C.	0. 0.	C. C.	C. C.	0. 0.	0. 0.	3.54 -22.21
-100	0. 0.	0. C.	C. C.	C. C.	0. 0.	-5.69 -18.64	2.18 -27.80
-90	0. C.	0. 0.	C. C.	C. C.	-10.40 -20.93	-4.89 -27.02	1.26 -34.62
-80	0. 0.	0. 0.	C. C.	-13.10 -25.67	-7.86 -31.24	-4.27 -35.26	1.01 -41.22
-70	0. 0.	0. 0.	-13.80 -30.26	-9.14 -35.12	-5.80 -38.54	-3.05 -41.53	1.74 -46.55
-60	0. 0.	-14.50 -32.14	-9.79 -36.95	-6.46 -40.56	-3.52 -43.37	-0.90 -45.96	3.73 -50.41
-50	-17.97 -30.29	-11.15 -36.47	-6.96 -40.57	-3.54 -43.64	-0.54 -46.33	2.07 -48.71	6.92 -52.88
-40	-17.68 -30.18	-9.20 -37.40	-4.31 -41.75	-0.50 -45.19	2.66 -47.79	5.62 -50.31	10.79 -54.47
-30	0. 0.	-10.20 -34.83	-3.06 -40.98	1.71 -45.12	5.54 -48.07	8.69 -50.78	14.27 -55.23

* REFER TO FIGURE 21 (RM 63 TMP-2)

*Table 37 (Cont.)

LONG (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=C.23 LAT (DEG)	B=C.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-20	0. 0.	0. 0.	-5.31 -36.08	2.16 -43.00	6.86 -47.12	10.59 -50.39	16.51 -55.27
-10	0. 0.	0. 0.	0. 0.	-2.53 -35.89	6.15 -44.80	10.80 -48.87	17.38 -54.66
0	0. 0.	0. 0.	0. 0.	0. 0.	-3.62 -6.07	8.99 -45.98	17.08 -53.23
10	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	15.72 -51.11
20	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	12.78 -47.33
30	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	8.26 -9.92 -28.94 -38.01
40	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.
90	0.	0.	0.	0.	0.	0.	0.
100	0.	0.	0.	0.	0.	0.	0.
110	0.	0.	0.	0.	0.	0.	0.
120	0.	0.	0.	0.	0.	0.	0.
130	0.	0.	0.	0.	0.	0.	0.
140	0.	0.	0.	0.	0.	0.	0.
150	0.	0.	0.	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.

* REFER TO FIGURE 21 (RM 63 TMP-2)

*Table 38. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 500 Kilometers

LONG (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	20.81 -1.24
-170	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	19.09 -4.30
-160	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	16.73 -7.33
-150	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.64 -10.84
-140	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0.62 -1.62	12.51 -14.47
-130	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	1.62 -9.26	10.75 -18.09
-120	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	1.30 -14.05	8.93 -21.99
-110	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	-6.93 -11.35	0.58 -18.88	7.17 -26.42
-100	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	-4.79 -19.63	-0.28 -24.77	5.67 -31.81
-90	0. 0.	0. 0.	0. 0.	0. 0.	-9.72 -21.30	-4.44 -27.38	-0.96 -31.58	4.47 -38.07
-80	0. 0.	0. 0.	0. 0.	-12.99 -25.39	-7.51 -31.15	-3.85 -35.28	-0.92 -38.52	3.97 -44.14
-70	0. 0.	0. 0.	-14.06 -29.12	-9.05 -34.51	-5.48 -38.20	-2.64 -41.38	0.06 -44.16	4.63 -48.97
-60	0. 0.	-15.15 -30.71	-9.90 -36.09	-6.34 -40.00	-3.26 -42.94	-0.47 -45.71	1.98 -48.10	6.59 -52.46
-50	-20.22 -26.04	-11.71 -35.20	-7.06 -39.64	-3.42 -42.94	-0.24 -45.89	2.47 -48.39	5.12 -50.74	9.91 -54.92
-40	0. 0.	-9.61 -35.86	-4.36 -40.76	-0.34 -44.38	2.95 -47.26	6.00 -49.98	8.75 -52.18	13.86 -56.35
-30	0. 0.	-11.07 -31.93	-3.06 -39.75	1.91 -44.13	5.84 -47.44	9.13 -50.39	12.06 -52.77	17.43 -57.08

* REFER TO FIGURE 22 (RM 63 TMP-2)

*Table 38 (Cont.)

LONG (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-20	0. 0.	0. 0.	-4.96 -33.62	2.54 -41.79	7.29 -46.39	11.06 -49.92	14.27 -52.54	19.89 -57.19
-10	0. 0.	0. 0.	0. 0.	-0.78 -32.63	6.85 -43.46	11.44 -48.14	15.12 -51.55	21.01 -56.72
0	0. 0.	0. 0.	0. 0.	0. 0.	1.96 -14.19	10.26 -45.17	14.61 -49.77	21.09 -55.71
10	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	5.37 -7.35	12.53 -46.19	20.28 -53.84
20	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	8.33 -8.68 -34.10 -35.52	18.34 -50.96 0. 0.
30	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	15.64 -45.91
40	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	11.99 -30.17
50	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	7.33 -9.99
60	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.
100	0.	0.	0.	0.	0.	0.	0.	0.
110	0.	0.	0.	0.	0.	0.	0.	0.
120	0.	0.	0.	0.	0.	0.	0.	0.
130	0.	0.	0.	0.	0.	0.	0.	0.
140	0.	0.	0.	0.	0.	0.	0.	0.
150	0.	0.	0.	0.	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.

* REFER TO FIGURE 22 (RM 63 TMP-2)

*Table 39. Constant Magnetic Field Intensity, B(Gauss), in the Region of the South Atlantic Anomaly at Altitude 600 Kilometers

LONG (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0. 0.	0. 0.	C. 0.	C. C.	0. 0.	0. 0.	15.40 3.41	25.68 -5.89
-170	0. 0.	0. 0.	0. C.	0. C.	0. 0.	0. 0.	13.93 -0.31	24.00 -8.72
-160	0. 0.	0. 0.	C. 0.	C. C.	0. 0.	0. 0.	12.08 -3.55	21.52 -11.70
-150	0. 0.	0. 0.	0. 0.	C. 0.	0. 0.	0. 0.	10.63 -7.25	18.95 -15.02
-140	0. 0.	0. 0.	0. 0.	C. C.	0. 0.	1.85 -5.04	9.09 -11.23	16.53 -18.30
-130	0. 0.	0. 0.	C. C.	C. C.	0. 0.	2.26 -10.21	7.56 -15.29	14.37 -21.88
-120	0. 0.	0. 0.	0. C.	0. C.	0. 0.	1.75 -14.80	6.18 -19.19	12.27 -25.75
-110	0. 0.	0. 0.	0. 0.	C. C.	-5.35 -12.09	0.95 -19.49	4.83 -23.59	10.44 -30.19
-100	0. 0.	C. 0.	0. 0.	C. C.	-4.49 -20.07	0.16 -25.19	3.34 -29.02	8.68 -35.48
-90	C. C.	0. 0.	0. C.	-9.62 -21.24	-4.17 -27.49	-0.50 -31.78	2.36 -35.40	7.35 -41.37
-80	0. 0.	0. 0.	-13.31 -24.54	-7.41 -30.84	-3.59 -35.14	-0.49 -38.51	2.10 -41.56	6.81 -46.90
-70	0. 0.	-14.68 -27.44	-9.16 -33.64	-5.35 -37.70	-2.38 -41.09	0.42 -44.00	2.84 -46.61	7.41 -51.36
-60	-17.04 -28.15	-10.36 -35.05	-6.43 -39.09	-3.15 -42.38	-0.19 -45.36	2.36 -47.86	4.87 -50.32	9.47 -54.64
-50	-12.69 -33.10	-7.42 -38.32	-3.49 -42.09	-0.12 -45.32	2.71 -47.95	5.47 -50.48	7.99 -52.68	12.84 -56.85
-40	-10.61 -33.68	-4.67 -39.47	-0.42 -43.36	3.05 -46.60	6.22 -49.45	9.10 -51.87	11.79 -54.18	16.91 -58.29
-30	-13.07 -28.16	-3.41 -37.84	1.85 -42.92	5.94 -46.68	9.37 -49.87	12.39 -52.40	15.29 -54.89	20.57 -59.07

* REFER TO FIGURE 23 (RM 63 TMP-2)

*Table 39 (Cont.)

LONG (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=C.22 LAT (DEG)	B=C.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-20	0. 0.	-5.62 -30.36	2.57 -40.43	7.47 -45.51	11.33 -49.16	14.67 -52.10	17.59 -54.83	23.08 -59.26
-10	0. 0.	0. 0.	-0.13 -28.29	7.23 -41.97	11.85 -47.26	15.57 -51.03	18.69 -54.01	24.40 -58.86
0	0. 0.	0. 0.	0. 0.	3.56 -17.43	10.87 -43.63	15.29 -48.89	18.69 -52.43	24.70 -57.89
10	0. 0.	0. 0.	0. 0.	0. 0.	7.02 -11.81	13.56 -45.25	17.65 -50.16	24.09 -56.32
20	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	10.44 -13.67	15.67 -45.83	22.57 -53.82
30	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0.66 -0.30	12.32 -34.70	20.31 -49.92
40	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	7.91 -10.51	17.25 -42.00
50	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.06 -23.06
60	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	10.27 -8.73
70	0.	0.	0.	0.	0.	0.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.
100	0.	0.	0.	0.	0.	0.	0.	0.
110	0.	0.	0.	0.	0.	0.	0.	0.
120	0.	0.	0.	0.	0.	0.	0.	0.
130	0.	0.	0.	0.	0.	0.	0.	0.
140	0.	0.	0.	0.	0.	0.	0.	0.
150	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	19.89 3.05
160	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	23.79 -0.32
170	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.18 7.95	25.76 -2.99

* REFER TO FIGURE 23 (RM 63 TMP-2)

*Table 40. Constant Magnetic Field Intensity, B(Gauss), in the Region of the South Atlantic Anomaly at Altitude 700 Kilometers

LONG (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	15.80 2.61	21.72 -2.84	29.63 -9.66
-170	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.59 -0.93	20.27 -5.90	28.01 -12.41
-160	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	12.59 -4.41	17.91 -8.95	25.57 -15.43
-150	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	11.01 -7.85	15.74 -12.17	22.74 -18.48
-140	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	2.38 -5.43	9.52 -11.68	13.59 -15.74	20.14 -21.80
-130	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	2.52 -10.48	7.88 -15.65	11.65 -19.36	17.61 -25.37
-120	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	1.92 -15.10	6.44 -19.63	9.95 -23.13	15.44 -29.20
-110	0. 0.	0. 0.	0. 0.	0. 0.	-5.39 -12.11	1.12 -19.77	5.13 -23.97	8.10 -27.50	13.35 -33.64
-100	0. 0.	0. 0.	0. 0.	0. 0.	-4.46 -20.06	0.33 -25.34	3.67 -29.33	6.57 -32.76	11.56 -38.89
-90	0. 0.	0. 0.	0. 0.	-9.85 -20.75	-4.11 -27.32	-0.25 -31.79	2.69 -35.52	5.48 -38.73	10.25 -44.54
-80	0. 0.	0. 0.	-14.16 -22.59	-7.55 -30.30	-3.51 -34.79	-0.23 -38.33	2.44 -41.53	5.06 -44.46	9.65 -49.68
-70	0. 0.	-16.79 -25.44	-9.52 -32.54	-5.45 -37.02	-2.28 -40.66	0.65 -43.70	3.20 -46.47	5.68 -49.05	10.27 -53.76
-60	-19.96 -20.52	-11.26 -33.30	-6.77 -38.00	-3.22 -41.66	-0.08 -44.86	2.59 -47.51	5.23 -50.12	7.64 -52.40	12.35 -56.79
-50	-14.16 -30.70	-8.07 -36.81	-3.77 -41.09	-0.21 -44.53	2.80 -47.38	5.68 -50.11	8.32 -52.43	10.90 -54.76	15.85 -58.92
-40	-12.54 -30.84	-5.34 -37.68	-0.77 -42.19	2.94 -45.81	6.27 -48.78	9.28 -51.44	12.08 -53.88	14.80 -56.14	19.98 -60.33
-30	0. 0.	-4.14 -35.78	1.53 -41.56	5.83 -45.77	9.41 -49.09	12.55 -51.90	15.54 -54.53	18.31 -56.80	23.68 -61.06

* REFER TO FIGURE 24 (RM 63 TMP-2)

*Table 40 (Cont.)

LONG (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	H=0.21 LAT (DEG)	H=0.22 LAT (DEG)	H=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	H=0.28 LAT (DEG)
-20	0.	-7.56	2.23	7.40	11.41	14.88	17.88	20.80	26.29
	0.	-25.41	-38.31	-44.25	-48.25	-51.54	-54.40	-56.83	-61.27
-10	0.	0.	-0.68	7.27	12.02	15.83	19.07	22.07	27.71
	0.	0.	-23.06	-40.32	-46.22	-50.38	-53.50	-56.26	-60.98
0	0.	0.	C.	4.16	11.20	15.65	19.19	22.33	28.14
	0.	0.	C.	-17.11	-41.82	-47.85	-51.84	-55.13	-60.20
10	0.	0.	C.	0.	8.01	14.26	18.27	21.70	27.68
	0.	0.	0.	C.	-13.94	-43.54	-49.24	-52.93	-58.68
20	0.	0.	C.	C.	0.	11.32	16.39	20.23	26.37
	0.	0.	0.	C.	0.	-17.14	-44.73	-49.90	-56.43
30	0.	0.	C.	0.	0.	6.01	13.41	17.66	24.22
	C.	0.	0.	0.	0.	-4.78	-31.01	-44.16	-52.90
40	0.	0.	0.	C.	0.	0.	9.70	14.71	21.50
	0.	0.	0.	0.	0.	0.	-12.43	-29.90	-46.99
50	0.	0.	C.	C.	0.	0.	0.12	10.93	18.62
	C.	0.	0.	C.	0.	0.	-0.10	-13.78	-34.65
60	0.	0.	0.	0.	0.	0.	0.	0.86	15.86
	0.	0.	C.	C.	0.	0.	0.	-0.18	-17.45
70	0.	0.	0.	C.	0.	0.	0.	0.	12.58
	0.	0.	0.	0.	0.	0.	0.	0.	-6.08
80	0.	0.	0.	C.	0.	0.	0.	C.	C.
90	0.	0.	0.	C.	0.	0.	0.	0.	C.
100	0.	0.	0.	C.	0.	0.	0.	0.	C.
110	C.	0.	C.	0.	0.	0.	0.	C.	C.
120	0.	0.	C.	C.	0.	0.	0.	C.	C.
130	0.	0.	C.	C.	0.	0.	0.	0.	15.04
140	C.	0.	C.	C.	0.	0.	0.	0.	20.27
	0.	0.	0.	C.	0.	0.	0.	0.	0.59
150	C.	0.	C.	C.	0.	0.	0.	11.78	24.73
	0.	C.	C.	C.	0.	0.	0.	9.31	-1.77
160	0.	0.	0.	0.	0.	0.	0.	19.71	27.91
	C.	0.	C.	C.	0.	0.	0.	3.45	-4.29
170	0.	0.	C.	C.	0.	0.	15.24	21.75	29.68
	0.	0.	C.	C.	0.	0.	6.59	-0.11	-6.84

• REFER TO FIGURE 24 (RM 63 TMP-2)

*Table 41. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 800 Kilometers

LONG (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	15.83 2.21	21.82 -3.32	26.19 -7.06	33.09 -12.95
-170	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.72 -1.25	20.41 -6.31	24.70 -10.06	31.65 -15.82
-160	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	12.73 -4.86	18.12 -9.43	22.27 -12.88	29.21 -18.72
-150	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	11.12 -8.15	15.94 -12.56	19.83 -16.06	26.30 -21.81
-140	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	2.21 -5.41	9.63 -11.90	13.82 -16.06	17.33 -19.42	23.41 -25.15
-130	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	2.37 -10.44	7.97 -15.81	11.86 -19.71	15.19 -22.88	20.78 -28.63
-120	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	1.82 -15.07	6.53 -19.82	10.15 -23.44	13.06 -26.71	18.36 -32.53
-110	0. 0.	0. 0.	0. 0.	0. 0.	-7.14 -11.34	1.06 -19.73	5.22 -24.13	8.34 -27.78	11.20 -31.10	16.23 -37.05
-100	0. 0.	0. 0.	0. 0.	0. 0.	-4.72 -19.54	0.33 -25.26	3.82 -29.41	6.82 -32.97	9.57 -36.27	14.39 -42.24
-90	0. 0.	0. 0.	0. 0.	-11.40 -19.51	-4.28 -26.88	-0.21 -31.59	2.87 -35.48	5.75 -38.82	8.27 -41.91	12.99 -47.60
-80	0. 0.	0. 0.	-19.63 -20.07	-8.00 -29.33	-3.62 -34.16	-0.15 -37.97	2.65 -41.35	5.36 -44.41	7.78 -47.18	12.43 -52.39
-70	0. 0.	0. 0.	-10.22 -31.20	-5.81 -36.15	-2.37 -40.07	0.73 -43.24	3.42 -46.20	6.00 -48.91	8.42 -51.45	13.11 -56.21
-60	0. 0.	-12.60 -31.31	-7.37 -36.73	-3.49 -40.80	-0.16 -44.12	2.67 -47.03	5.43 -49.78	7.96 -52.21	10.48 -54.61	15.32 -59.03
-50	-17.59 -26.42	-9.04 -35.13	-4.28 -39.90	-0.51 -43.50	2.70 -46.67	5.73 -49.55	8.50 -52.07	11.19 -54.52	13.79 -56.75	18.90 -61.04
-40	-15.75 -26.12	-6.58 -35.71	-1.40 -40.85	2.62 -44.83	6.14 -47.97	9.29 -50.89	12.21 -53.46	15.05 -55.89	17.75 -58.11	23.10 -62.34
-30	0. 0.	-5.46 -32.82	0.92 -40.02	5.51 -44.61	9.24 -48.16	12.53 -51.28	15.64 -54.03	18.52 -56.51	21.34 -58.83	26.86 -63.09
-20	0. 0.	-14.25 -15.57	1.51 -35.83	7.06 -42.60	11.27 -47.18	14.88 -50.83	18.00 -53.82	21.03 -56.49	23.89 -58.93	29.52 -63.32

* REFER TO FIGURE 25 (RM 63 TMP-2)

*Table 41 (Cont.)

LONG (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-10	0. 0.	0. 0.	-2.50 -17.64	6.96 -37.64	11.94 -45.01	15.89 -49.43	19.26 -52.84	22.35 -55.86	25.33 -58.44	31.06 -63.06
0	0. 0.	0. 0.	0. 0.	3.78 -15.18	11.23 -39.77	15.80 -46.64	19.47 -51.09	22.68 -54.57	25.76 -57.36	31.59 -62.31
10	0. 0.	0. 0.	0. 0.	0. 0.	8.34 -14.20	14.60 -41.50	18.65 -48.07	22.12 -52.26	25.33 -55.67	31.22 -61.02
20	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	11.81 -18.01	16.86 -42.84	20.72 -48.86	23.98 -52.83	29.99 -58.96
30	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	7.08 -6.32	14.16 -27.68	18.33 -42.71	21.83 -48.45	27.93 -55.85
40	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	10.53 -13.26	15.47 -28.70	19.13 -40.42	25.37 -50.88
50	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	4.01 -2.70	11.82 -14.54	16.15 -24.36	22.63 -41.73
60	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	6.12 -2.46	12.81 -11.57	20.24 -25.56
70	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	7.04 -0.01	17.97 -13.07
80	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	16.06 -5.09
90	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.44 -0.09
100	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	13.55 2.44
110	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	15.06 1.85
120	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	17.23 -0.18
130	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	20.83 -1.81
140	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	15.68 4.72	24.84 -3.63
150	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.25 8.21	21.10 1.32	28.58 -5.60
160	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	20.03 2.95	24.68 -1.53	31.53 -7.72
170	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	15.28 5.96	21.86 -0.50	26.29 -4.35	33.08 -10.31

• REFER TO FIGURE 25 (RM 63 TMP-2)

*Table 42. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 900 Kilometers

LONG (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	15.50 2.26	21.68 -3.54	26.18 -7.38	30.00 -10.67	36.41 -16.17
-170	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.33 -1.24	20.33 -6.50	24.74 -10.35	28.45 -13.44	35.11 -19.00
-160	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	12.50 -4.87	18.09 -9.65	22.36 -13.20	26.10 -16.38	32.65 -21.93
-150	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	10.95 -8.13	15.94 -12.73	19.97 -16.35	23.39 -19.49	29.72 -25.06
-140	0. 0.	0. 0.	0. 0.	0. 0.	1.34 -4.63	9.43 -11.86	13.84 -16.20	17.47 -19.72	20.78 -22.72	26.67 -28.32
-130	0. 0.	0. 0.	0. 0.	0. 0.	1.81 -10.08	7.81 -15.77	11.88 -19.85	15.34 -23.15	18.30 -26.25	23.84 -31.89
-120	0. 0.	0. 0.	0. 0.	0. 0.	1.41 -14.60	6.41 -19.75	10.19 -23.56	13.23 -26.95	16.11 -30.12	21.30 -35.88
-110	0. 0.	0. 0.	0. 0.	0. 0.	0.76 -19.33	5.15 -24.05	8.41 -27.87	11.39 -31.32	14.10 -34.51	19.06 -40.47
-100	0. 0.	0. 0.	0. 0.	-5.60 -18.42	0.11 -24.94	3.78 -29.27	6.93 -33.00	9.81 -36.42	12.34 -39.63	17.17 -45.59
-90	0. 0.	0. 0.	-14.52 -15.56	-4.68 -26.16	-0.41 -31.17	2.88 -35.25	5.89 -38.73	8.54 -41.96	11.07 -45.04	15.82 -50.71
-80	0. 0.	0. 0.	-8.75 -27.88	-3.94 -33.30	-0.29 -37.43	2.69 -41.01	5.53 -44.20	8.07 -47.12	10.57 -49.95	15.30 -55.19
-70	0. 0.	-11.72 -29.38	-6.45 -35.09	-2.65 -39.16	0.64 -42.63	3.48 -45.80	6.19 -48.63	8.74 -51.32	11.22 -53.86	16.05 -58.71
-60	-14.46 -28.37	-8.27 -35.26	-3.97 -39.69	-0.45 -43.22	2.58 -46.40	5.48 -49.28	8.15 -51.90	10.77 -54.43	13.31 -56.79	18.37 -61.36
-50	-10.58 -32.45	-5.06 -38.14	-1.06 -42.30	2.41 -45.82	5.61 -48.83	8.52 -51.57	11.33 -54.15	14.05 -56.54	16.73 -58.85	22.08 -63.23
-40	-8.28 -32.87	-2.34 -39.10	2.07 -43.44	5.82 -47.01	9.12 -50.21	12.18 -52.90	15.14 -55.52	17.95 -57.87	20.75 -60.20	26.34 -64.50
-30	-8.00 -28.97	0.02 -37.66	4.95 -43.00	8.85 -47.06	12.33 -50.52	15.58 -53.40	18.58 -56.09	21.51 -58.54	24.37 -60.88	30.10 -65.23
-20	0. 0.	0.38 -32.37	6.44 -40.77	10.92 -45.94	14.67 -49.97	17.95 -53.11	21.09 -56.02	24.07 -58.60	27.00 -61.02	32.87 -65.47
-10	0. 0.	0. 0.	6.29 -34.54	11.61 -43.01	15.75 -48.16	19.25 -52.02	22.45 -55.33	25.54 -58.05	28.51 -60.66	34.47 -65.27

• REFER TO FIGURE 26 (RM 63 TMP-2)

*Table 42 (Cont.)

LONG (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=C.20 LAT (DEG)	B=C.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=C.25 LAT (DEG)	B=0.26 LAT (DEG)	B=C.28 LAT (DEG)
0	0. 0.	0. 0.	2.42 -12.18	10.96 -36.32	15.72 -45.24	19.53 -50.19	22.85 -53.81	26.02 -56.91	29.05 -59.74	35.07 -64.58
10	0. 0.	0. 0.	C. C.	8.04 -13.15	14.60 -38.83	18.79 -46.71	22.36 -51.43	25.65 -55.15	28.71 -58.08	34.76 -63.31
20	0. 0.	0. 0.	0. 0.	C. 0.	11.92 -17.18	17.07 -40.82	21.01 -47.64	24.40 -52.11	27.52 -55.71	33.58 -61.43
30	0. 0.	0. 0.	0. 0.	C. C.	7.41 -6.59	14.55 -24.76	18.76 -41.10	22.30 -47.46	25.56 -51.89	31.60 -58.59
40	0. 0.	0. 0.	0. 0.	C. 0.	0. 0.	10.93 -13.25	15.92 -27.16	19.75 -39.05	22.99 -45.73	29.05 -54.27
50	0. 0.	0. 0.	0. 0.	C. 0.	0. 0.	5.34 -3.57	12.44 -14.71	16.79 -24.17	20.37 -33.76	26.43 -46.88
60	0. 0.	0. 0.	0. 0.	C. C.	0. 0.	0. 0.	7.27 -3.70	13.71 -12.19	17.69 -19.06	24.10 -33.43
70	0. 0.	0. 0.	0. C.	C. C.	0. 0.	0. 0.	0. 0.	9.49 -1.40	15.30 -8.62	22.20 -19.35
80	0. 0.	0. 0.	0. 0.	C. 0.	0. 0.	0. 0.	0. 0.	0. 0.	11.99 -0.49	20.84 -10.84
90	0. 0.	C. 0.	0. 0.	C. C.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	19.99 -6.02
100	C. 0.	0. 0.	C. C.	C. C.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	19.72 -3.95
110	0. 0.	0. 0.	C. C.	0. C.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	20.46 -3.80
120	0. 0.	0. 0.	0. 0.	C. 0.	0. 0.	0. 0.	C. 0.	0. 0.	12.11 4.67	22.20 -4.73
130	0. 0.	0. 0.	C. 0.	C. C.	0. 0.	0. 0.	0. 0.	0. 0.	17.09 1.74	25.19 -5.87
140	0. 0.	0. 0.	0. C.	C. C.	0. 0.	0. 0.	0. 0.	16.27 4.17	21.58 -0.82	28.65 -7.18
150	0. 0. 0.	0. 0. 0.	0. C. 0.	C. C. C.	0. 0. 0.	0. 0. 0.	15.00 15.00 7.71	21.36 0.81 0.	25.61 -2.95 0.	32.14 -8.88 0.
160	0. 0.	0. 0.	C. C.	0. C.	0. 0.	0. 0.	19.97 2.72	24.78 -1.87	28.49 -5.41	34.92 -10.98
170	0. 0.	0. 0.	0. 0.	C. 0.	0. 0.	14.79 6.25	21.72 -0.68	26.28 -4.73	30.07 -7.87	36.36 -13.43

• REFER TO FIGURE 26 (RM 63 TMP-2)

*Table 43. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 1000 Kilometers

LONG (DEG)	B=0.17 LAT (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0. 0.	0. 0.	C. C.	C. C.	0. 0.	14.62 2.83	21.30 -3.50	25.97 -7.52	29.91 -10.92	33.32 -13.87	39.63 -19.28
-170	0. 0.	0. 0.	0. C.	C. C.	0. 0.	13.44 -0.89	20.01 -6.47	24.54 -10.47	28.40 -13.70	31.94 -16.68	38.37 -22.13
-160	C. 0.	C. 0.	C. C.	C. C.	0. 0.	11.89 -4.38	17.80 -9.62	22.25 -13.34	26.11 -16.62	29.63 -19.63	36.05 -25.11
-150	0. 0.	0. 0.	C. C.	C. C.	0. 0.	10.49 -7.77	15.73 -12.69	19.90 -16.46	23.45 -19.75	26.81 -22.66	33.05 -28.21
-140	0. 0.	0. 0.	C. C.	C. C.	0. 0.	8.90 -11.55	13.63 -16.14	17.44 -19.83	20.88 -22.96	24.01 -25.96	29.92 -31.55
-130	0. C.	C. 0.	C. C.	C. 0.	0.80 -0.52	7.40 -15.48	11.72 -19.76	15.33 -23.23	18.43 -26.46	21.38 -29.48	26.93 -35.18
-120	C. 0.	C. 0.	C. C.	C. C.	0.69 -13.58	6.08 -19.39	10.07 -23.47	13.25 -27.02	16.24 -30.32	19.01 -33.35	24.25 -39.26
-110	C. C.	0. C.	C. C.	C. C.	0.21 -18.53	4.85 -23.71	8.30 -27.76	11.43 -31.36	14.27 -34.70	16.90 -37.82	21.93 -43.91
-100	0. 0.	0. 0.	C. C.	-7.49 -16.70	-0.47 -24.19	3.53 -28.89	6.87 -32.82	9.89 -36.40	12.53 -39.75	15.15 -42.88	20.02 -48.95
-90	C. C.	C. 0.	0. C.	-5.59 -25.14	-0.86 -30.52	2.70 -34.81	5.87 -38.45	8.66 -41.84	11.30 -45.06	13.81 -48.04	18.66 -53.83
-80	0. 0.	C. 0.	-9.86 -26.11	-4.50 -32.19	-0.64 -36.68	2.56 -40.50	5.55 -43.83	8.22 -46.92	10.83 -49.88	13.32 -52.64	18.22 -58.02
-70	0. 0.	-13.79 -26.46	-7.39 -33.42	-3.15 -38.04	0.39 -41.84	3.38 -45.24	6.23 -48.20	8.91 -51.06	11.50 -53.73	14.04 -56.32	19.09 -61.32
-60	-19.59 -21.10	-9.49 -33.01	-4.68 -38.14	-0.96 -42.14	2.31 -45.62	5.38 -48.63	8.18 -51.45	10.93 -54.11	13.58 -56.62	16.23 -59.06	21.56 -63.77
-50	-13.33 -29.11	-6.44 -36.17	-1.87 -40.91	1.92 -44.76	5.32 -47.95	8.37 -50.94	11.32 -53.65	14.16 -56.21	16.96 -58.64	19.73 -61.00	25.37 -65.54
-40	-10.89 -29.20	-3.61 -36.83	1.27 -41.86	5.30 -45.88	8.75 -49.25	11.97 -52.20	15.07 -55.02	17.99 -57.50	20.91 -59.98	23.80 -62.25	29.69 -66.72
-30	-13.05 -21.93	-1.68 -35.10	3.95 -41.21	8.23 -45.79	11.94 -49.51	15.34 -52.62	18.46 -55.55	21.51 -58.12	24.49 -60.63	27.47 -62.94	33.54 -67.39
-20	0. 0.	-1.89 -27.81	5.53 -38.25	10.35 -44.34	14.24 -48.67	17.70 -52.23	20.98 -55.41	24.07 -58.13	27.11 -60.73	30.13 -63.11	36.36 -67.63
-10	0. 0.	0. C.	5.26 -30.15	11.03 -40.84	15.40 -46.70	19.04 -51.04	22.38 -54.58	25.58 -57.52	28.66 -60.33	31.74 -62.78	38.06 -67.44

* REFER TO FIGURE 27 (RM 63 IMP-2)

*Table 43 (Cont.)

LONG (DEG)	B=0.17 LAT (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
0	0. 0.	0. 0.	0.08 -7.07	10.38 -31.85	15.41 -43.01	19.36 -48.78	22.82 -52.88	26.11 -55.31	29.24 -59.30	32.36 -61.94	38.73 -66.82
10	0. 0.	0. 0.	0. 0.	7.11 -11.06	14.24 -35.05	18.67 -45.17	22.38 -50.43	25.79 -54.35	28.96 -57.57	32.10 -60.55	38.47 -65.71
20	0. 0.	0. 0.	0. 0.	0. 0.	11.65 -15.39	17.03 -37.74	21.10 -46.23	24.61 -51.21	27.83 -55.14	30.98 -58.29	37.30 -63.94
30	0. 0.	0. 0.	0. 0.	0. 0.	7.03 -5.86	14.58 -22.15	18.93 -38.91	22.58 -46.27	25.94 -51.14	29.08 -55.08	35.30 -61.35
40	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	10.99 -12.57	16.15 -25.36	20.13 -37.30	23.46 -44.76	26.65 -49.86	32.80 -57.43
50	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	5.37 -3.06	12.77 -14.37	17.21 -23.55	20.88 -32.85	24.10 -40.64	30.17 -51.24
60	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	7.88 -4.03	14.33 -12.39	18.32 -19.27	21.76 -26.28	27.85 -40.34
70	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	10.48 -2.22	15.96 -9.32	19.87 -14.82	26.08 -25.73
80	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	13.17 -1.47	18.06 -7.17	24.84 -16.10
90	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	10.12 4.80	16.78 -2.43	24.05 -10.86
100	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	16.38 -0.55	23.91 -8.47
110	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	17.13 -0.58	24.65 -7.94
120	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	13.52 3.89	19.30 -1.60	26.30 -8.39
130	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	17.71 1.12	22.23 -3.07	28.98 -9.31
140	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	16.53 3.92	21.92 -1.16	25.87 -4.81	32.28 -10.49
150	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.24 7.93	21.38 0.59	25.76 -3.27	29.33 -6.53	35.58 -12.01
160	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	19.50 2.80	24.64 -2.02	28.51 -5.67	31.96 -8.67	38.12 -14.07
170	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	12.61 7.66	21.33 -0.63	26.09 -4.89	30.01 -8.15	33.35 -11.17	35.55 -16.54

* REFER TO FIGURE 27 (RM 63 TMP-2)

*Table 44. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 1200 Kilometers

LONG (DEG)	B=0.16 LAT (DEG)	B=0.17 LAT (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	19.70 -2.51	24.96 -7.18	29.15 -10.92	32.89 -14.15	36.40 -17.12	39.72 -20.01	46.08 -25.52
-170	0. 0.	0. 0.	0. 0.	0. 0.	10.18 2.49	18.28 -5.67	23.47 -10.17	27.73 -13.70	31.57 -16.93	35.15 -19.99	38.50 -22.84	45.01 -28.47
-160	0. 0.	0. 0.	0. 0.	0. 0.	9.05 -1.75	16.43 -8.65	21.38 -12.98	25.59 -16.61	29.35 -19.89	32.87 -22.88	36.28 -25.82	42.88 -31.53
-150	0. 0.	0. 0.	0. 0.	0. 0.	7.83 -5.89	14.50 -11.86	19.08 -16.12	23.02 -19.72	26.66 -22.90	30.12 -25.98	33.41 -28.92	39.92 -34.74
-140	0. 0.	0. 0.	0. 0.	0. 0.	6.76 -10.04	12.48 -15.38	16.80 -19.42	20.56 -22.90	23.96 -26.18	27.20 -29.26	30.37 -32.26	36.63 -38.22
-130	0. 0.	0. 0.	0. 0.	0. 0.	5.74 -13.75	10.78 -18.85	14.76 -22.83	18.17 -26.39	21.41 -29.69	24.48 -32.81	27.45 -35.90	33.37 -42.07
-120	0. 0.	0. 0.	0. 0.	-3.94 -9.47	4.61 -17.77	9.09 -22.61	12.74 -26.60	16.06 -30.22	19.10 -33.53	21.99 -36.78	24.83 -39.97	30.43 -46.40
-110	0. 0.	0. 0.	0. 0.	-2.94 -15.72	3.33 -22.22	7.50 -26.89	11.03 -30.89	14.14 -34.52	17.03 -37.94	19.84 -41.28	22.54 -44.56	27.76 -51.17
-100	0. 0.	0. 0.	0. 0.	-2.77 -21.64	2.34 -27.36	6.22 -31.85	9.54 -35.81	12.49 -39.44	15.34 -42.86	18.02 -46.21	20.69 -49.48	25.99 -56.03
-90	0. 0.	0. 0.	-9.27 -20.70	-2.62 -28.09	1.74 -33.11	5.35 -37.30	8.41 -41.08	11.33 -44.58	14.09 -47.81	16.77 -51.00	19.41 -54.19	24.72 -60.44
-80	0. 0.	0. 0.	-7.00 -28.89	-2.09 -34.45	1.73 -38.76	5.11 -42.54	8.05 -46.02	10.92 -49.26	13.66 -52.33	16.36 -55.34	19.03 -58.25	24.49 -64.09
-70	0. 0.	-10.59 -28.81	-4.89 -35.13	-0.86 -35.63	2.60 -43.42	5.82 -46.86	8.77 -50.09	11.62 -53.04	14.41 -55.92	17.17 -58.70	19.93 -61.45	25.68 -66.92
-60	-14.92 -25.91	-7.51 -34.18	-2.74 -39.25	1.17 -43.29	4.60 -46.84	7.72 -50.12	10.76 -53.04	13.67 -55.89	16.56 -58.59	19.44 -61.24	22.38 -63.83	28.52 -69.01
-50	-10.81 -30.25	-4.36 -36.87	0.25 -41.68	4.05 -45.68	7.51 -49.10	10.78 -52.19	13.88 -55.15	16.93 -57.84	19.94 -60.50	22.99 -63.03	26.08 -65.55	32.65 -70.51
-40	-8.28 -30.39	-1.46 -37.54	3.34 -42.62	7.36 -46.73	11.01 -50.33	14.37 -53.43	17.58 -56.35	20.75 -59.09	23.87 -61.69	27.04 -64.22	30.24 -66.67	37.15 -71.52
-30	-7.63 -26.00	0.97 -36.06	6.22 -42.06	10.52 -46.68	14.25 -50.56	17.70 -53.86	21.02 -56.87	24.24 -59.72	27.44 -62.31	30.67 -64.88	33.98 -67.31	41.10 -72.10
-20	0. 0.	1.90 -30.99	8.09 -39.82	12.68 -45.50	16.62 -49.94	20.23 -53.51	23.56 -56.74	26.85 -59.74	30.09 -62.41	33.39 -65.05	36.78 -67.49	44.05 -72.31
-10	0. 0.	0.24 -17.45	8.66 -34.09	13.82 -42.55	17.95 -48.11	21.66 -52.37	25.14 -56.00	28.44 -59.15	31.74 -62.00	35.05 -64.73	38.50 -67.25	45.92 -72.16

* REFER TO FIGURE 28 (RM 63 TMP-2)

*Table 44 (Cont.)

LONG (DEG)	B=0.16 LAT (DEG)	B=0.17 LAT (DEG)	B=0.18 LAT (DEG)	B=C.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=C.26 LAT (DEG)	B=0.28 LAT (DEG)
0	0. 0.	0. 0.	7.34 -20.38	13.78 -36.81	18.30 -45.22	22.17 -50.47	25.74 -54.55	29.10 -57.94	32.44 -61.06	35.79 -63.89	39.24 -66.56	46.75 -71.63
10	0. 0.	0. 0.	-0. -0.	12.44 -23.47	17.68 -39.86	21.82 -47.12	25.50 -52.09	28.91 -56.08	32.26 -59.49	35.62 -62.49	39.06 -65.38	46.55 -70.69
20	0. 0.	0. 0.	0. 0.	9.87 -10.32	16.13 -28.55	20.64 -41.83	24.41 -48.49	27.88 -53.17	31.26 -57.02	34.59 -60.45	38.03 -63.49	45.36 -69.20
30	0. 0.	0. 0.	0. 0.	0. 0.	13.48 -16.73	18.51 -32.40	22.51 -42.64	26.12 -48.83	29.50 -53.42	32.83 -57.29	36.20 -60.78	43.41 -67.02
40	0. 0.	0. 0.	0. 0.	0. 0.	10.04 -9.41	15.85 -21.06	20.18 -32.81	23.80 -41.63	27.22 -47.76	30.54 -52.57	33.84 -56.69	40.80 -63.84
50	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	12.43 -12.32	17.37 -21.23	21.32 -30.20	24.83 -38.36	28.10 -45.04	31.36 -50.36	38.05 -59.07
60	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	7.11 -2.26	14.61 -11.62	18.91 -18.61	22.56 -25.56	25.93 -32.74	29.12 -39.73	35.54 -51.42
70	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	10.79 -2.21	16.59 -9.60	20.72 -15.29	24.18 -20.80	27.38 -26.56	33.61 -39.12
80	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.30 -2.26	19.15 -8.09	22.84 -12.89	26.17 -17.44	32.30 -26.93
90	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	11.40 3.48	17.92 -3.59	22.01 -8.19	25.48 -12.24	31.57 -19.91
100	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	17.51 -1.51	21.81 -6.05	25.36 -9.82	31.48 -16.56
110	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	10.81 6.77	18.23 -1.34	22.44 -5.63	25.98 -9.09	32.18 -15.30
120	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	14.56 3.46	20.23 -2.19	24.12 -6.11	27.53 -9.38	33.82 -15.19
130	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	18.04 0.91	22.84 -3.54	26.65 -7.04	30.08 -10.19	36.37 -15.69
140	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	15.96 4.37	21.92 -1.22	26.17 -5.18	29.81 -8.31	33.08 -11.26	39.43 -16.65
150	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	20.68 1.11	25.50 -3.31	29.36 -6.84	32.81 -10.01	36.10 -12.78	42.41 -18.14
160	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	17.31 4.03	23.59 -1.65	27.98 -5.69	31.75 -8.99	35.21 -11.99	38.42 -14.85	44.69 -20.20
170	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	19.68 0.37	25.11 -4.49	29.30 -8.16	32.98 -11.45	36.43 -14.46	39.70 -17.26	45.97 -22.72

• REFER TO FIGURE 28 (RM 63 TMP-2)

*Table 45. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 1400 Kilometers

LONG (DEG)	B=C.15 LAT (DEG)	B=C.16 LAT (DEG)	B=C.17 LAT (DEG)	B=C.18 LAT (DEG)	B=C.19 LAT (DEG)	B=C.20 LAT (DEG)	B=C.21 LAT (DEG)	B=C.22 LAT (DEG)	B=C.23 LAT (DEG)	B=C.24 LAT (DEG)	B=C.25 LAT (DEG)	B=C.26 LAT (DEG)	B=C.28 LAT (DEG)
-180	0. 0.	0. 0.	0. 0.	0. 0.	16.15 -0.16	22.70 -5.90	27.57 -10.18	31.76 -13.70	35.59 -16.99	39.18 -20.13	42.65 -23.12	46.08 -26.11	-32.19 0.
-170	0. 0.	0. 0.	0. 0.	0. 0.	15.29 -3.02	21.43 -8.75	26.26 -12.89	30.49 -16.50	34.33 -19.83	37.98 -22.94	41.53 -26.01	45.03 -29.05	52.19 -35.24
-160	0. 0. 0.	0. 0. 0.	0. 0. 0.	0. 0. 0.	13.51 -6.38 0.	19.54 -11.70 0.	24.19 -15.85 0.	28.31 -19.43 0.	32.16 -22.72 0.	35.85 -25.91 0.	39.42 -29.01 0.	42.98 -32.12 0.	50.25 -45.42 -38.48
-150	0. 0.	0. 0.	0. 0.	0. 0.	11.78 -9.92	17.31 -14.93	21.79 -18.87	25.80 -22.44	29.52 -25.81	33.10 -29.02	36.63 -32.18	40.15 -35.35	47.49 -41.92
-140	0. 0. 0.	0. 0. 0.	0. 0. 0.	1.05 -5.00 -5.00	10.29 -13.18 0.	15.31 -18.07 0.	19.45 -22.08 0.	23.18 -25.71 0.	26.74 -29.07 0.	30.19 -32.34 0.	33.56 -35.58 0.	36.98 -38.84 0.	44.11 -45.65 0.
-130	0. 0.	0. 0.	0. 0.	1.45 -10.08	8.58 -16.83	13.25 -21.56	17.18 -25.57	20.76 -29.16	24.10 -32.60	27.35 -35.97	30.57 -39.31	33.81 -42.71	40.63 -49.82
-120	0. 0.	0. 0.	0. 0.	1.14 -14.58	7.10 -20.75	11.46 -25.35	15.21 -29.31	18.52 -32.98	21.71 -36.53	24.81 -40.01	27.87 -43.48	30.96 -47.02	37.47 -54.50
-110	0. 0.	0. 0.	0. 0.	0.63 -19.27	5.83 -25.06	9.90 -29.54	13.32 -33.54	16.55 -37.31	19.63 -40.96	22.59 -44.52	25.55 -48.10	28.52 -51.73	34.74 -59.39
-100	0. 0.	0. 0.	-8.44 -15.75	0.13 -24.61	4.72 -29.94	8.42 -34.33	11.78 -38.33	14.94 -42.11	17.88 -45.77	20.81 -49.33	23.69 -52.88	26.63 -56.48	32.80 -64.04
-90	0. 0.	0. 0.	-6.06 -23.82	-0.19 -30.41	3.89 -35.29	7.44 -39.50	10.72 -43.34	13.75 -46.99	16.70 -50.51	19.59 -53.93	22.49 -57.34	25.42 -60.77	31.68 -67.98
-80	0. 0.	-13.02 -21.75	-4.67 -30.69	0.05 -36.02	3.78 -40.46	7.18 -44.35	10.38 -47.94	13.38 -51.37	16.34 -54.67	19.27 -57.88	22.24 -61.09	25.24 -64.31	31.77 -71.04
-70	0. 0.	-8.76 -30.17	-3.26 -36.09	0.98 -40.76	4.63 -44.78	7.91 -48.33	11.09 -51.70	14.14 -54.92	17.16 -57.98	20.18 -61.02	23.28 -64.02	26.47 -67.06	33.43 -73.35
-60	-13.48 -26.64	-5.89 -34.82	-1.07 -40.02	2.91 -44.20	6.51 -47.89	9.89 -51.32	13.07 -54.52	16.23 -57.53	19.36 -60.49	22.56 -63.36	25.81 -66.22	29.21 -69.08	36.80 -74.98
-50	-9.36 -30.41	-2.99 -37.19	1.75 -42.19	5.81 -46.36	9.46 -50.07	12.87 -53.32	16.21 -56.44	19.48 -59.40	22.77 -62.24	26.11 -65.04	29.55 -67.78	33.20 -70.54	41.36 -76.18
-40	-6.69 -30.55	0.18 -37.82	5.05 -43.09	9.14 -47.38	12.89 -51.14	16.45 -54.53	19.88 -57.60	23.26 -60.57	26.66 -63.37	30.10 -66.12	33.72 -68.82	37.53 -71.51	46.14 -76.96
-30	-4.93 -26.94	2.63 -36.47	7.89 -42.58	12.24 -47.34	16.15 -51.37	19.79 -54.96	23.27 -58.10	26.73 -61.12	30.18 -63.97	33.73 -66.71	37.43 -69.40	41.33 -72.06	50.21 -77.41
-20	-8.48 -15.52	4.24 -32.23	10.12 -40.53	14.64 -46.22	18.59 -50.77	22.30 -54.64	25.86 -57.98	29.35 -61.13	32.87 -64.06	36.47 -66.85	40.19 -69.57	44.20 -72.22	53.35 -77.56

* REFER TO FIGURE 29 (RM 63 IMP-2)

*Table 45 (Cont.)

LONG (DEG)	B=0.15 LAT (DEG)	B=0.16 LAT (DEG)	B=0.17 LAT (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-10	C. C.	3.90 -22.64	11.00 -35.88	15.94 -43.69	20.13 -49.22	23.88 -53.53	27.48 -57.24	31.02 -60.61	34.56 -63.64	38.22 -66.54	42.03 -69.32	46.06 -72.03	55.26 -77.43
0	0. 0.	0. C.	10.71 -26.27	16.24 -35.10	20.67 -46.44	24.56 -51.64	28.20 -55.87	31.78 -59.49	35.34 -62.70	39.00 -65.77	42.85 -68.64	46.93 -71.46	56.20 -77.01
10	0. 0.	0. 0.	8.54 -12.80	15.60 -20.28	20.36 -31.94	24.37 -48.71	28.08 -53.60	31.69 -57.61	35.25 -61.19	38.91 -64.45	42.75 -67.48	46.82 -70.45	56.11 -76.25
20	0. 0.	0. 0.	0. C.	13.73 -18.35	19.10 -34.46	23.33 -44.20	27.15 -50.33	30.79 -55.01	34.35 -58.88	37.99 -62.41	41.78 -65.74	45.79 -68.88	55.02 0.
30	0. 0. 0.	0. 0. 0.	C. -10.29 0.	10.75 -10.29 C.	16.98 -23.95 0.	21.55 -36.85 0.	25.52 -45.22 0.	29.15 -50.90 0.	32.73 -55.53 C.	36.32 -59.52 0.	40.00 -63.14 C.	43.98 -66.61 0.	53.14 53.26 -73.33
40	0. 0.	0. 0.	0. C.	5.29 -2.06	14.25 -15.79	19.23 -26.85	23.28 -37.02	27.01 -44.69	30.59 -50.43	34.13 -55.21	37.78 -59.40	41.62 -63.30	50.38 -70.80
50	0. 0.	0. 0.	C. C.	C. C.	10.61 -8.31	16.50 -17.65	20.92 -26.35	24.74 -34.92	28.29 -42.78	31.80 -48.43	35.31 -53.68	39.01 -58.37	47.39 -67.07
60	0. 0.	0. 0.	0. C.	C. 0.	0. 0.	13.40 -9.26	18.50 -16.63	22.55 -23.61	26.21 -30.78	29.67 -37.94	33.12 -44.66	36.65 -50.68	44.40 -61.35
70	0. 0.	0. 0.	0. C.	C. 0.	0. 0.	8.49 -0.01	16.19 -8.40	20.75 -14.52	24.53 -20.24	27.99 -26.14	31.38 -32.40	34.74 -38.99	42.08 -52.20
80	0. 0.	0. C.	0. 0.	C. C.	0. 0.	0. C.	13.59 -1.47	19.20 -7.81	23.21 -12.93	26.79 -17.74	30.16 -22.61	33.46 -27.75	40.36 -39.57
90	0. 0.	0. C.	0. C.	C. C.	0. 0.	0. 0.	10.52 4.50	17.96 -3.45	22.39 -8.42	26.10 -12.73	29.47 -16.85	32.74 -20.96	39.45 -29.84
100	0. 0.	0. 0.	C. C.	C. 0.	0. 0.	0. 0.	0. 0.	17.51 -1.35	22.18 -6.24	25.98 -10.29	29.38 -13.95	32.65 -17.54	39.32 -24.83
110	0. 0.	C. 0.	C. C.	C. C.	0. 0.	0. 0.	0. 0.	18.15 -1.08	22.77 -5.73	26.57 -9.48	30.03 -12.87	33.32 -16.15	40.04 -22.63
120	0. C.	0. 0.	C. 0.	C. C.	0. 0.	0. C.	12.74 4.64	20.09 -1.83	24.36 -6.12	28.04 -9.68	31.52 -12.85	34.87 -15.93	41.80 -21.93
130	0. 0.	0. 0.	C. 0.	C. C.	0. 0.	0. C.	16.97 2.20	22.51 -3.11	26.70 -7.00	30.41 -10.40	33.85 -13.42	37.26 -16.37	44.29 -22.13
140	0. 0.	0. 0.	0. C.	C. C.	0. 0.	11.49 8.68	20.90 -0.38	25.67 -4.76	29.62 -8.24	33.20 -11.45	36.67 -14.45	40.09 -17.31	47.24 -22.99
150	C. 0.	0. 0.	0. 0.	C. C.	0. 0.	18.27 3.08	24.23 -2.43	28.57 -6.46	32.39 -9.92	35.98 -12.96	39.41 -15.94	42.82 -18.79	49.87 -24.49
160	0. 0.	0. 0.	C. C.	C. C.	0. 0.	21.46 -0.28	26.61 -4.95	30.83 -8.57	34.59 -11.89	38.09 -15.02	41.52 -17.93	44.90 -20.83	51.92 -26.64
170	0. 0.	0. 0.	C. C.	C. C.	15.73 3.70	22.83 -2.96	27.75 -7.36	31.90 -11.05	35.69 -14.34	39.22 -17.40	42.64 -20.40	46.04 -23.32	53.00 0.

• REFER TO FIGURE 29 (RM 63 TMP-2)

*Table 46. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 1600 Kilometers

LONG (DEG)	B=0.15 LAT (DEG)	B=0.16 LAT (DEG)	B=0.17 LAT (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0.	0.	0.	19.11	25.09	29.81	33.99	37.91	41.70	45.42	49.15	53.02	61.67
	0.	0.	0.	-2.98	-8.30	-12.45	-16.14	-19.56	-22.83	-26.08	-29.32	-32.66	-39.73
-170	0.	0.	5.30	17.89	23.72	28.47	32.73	36.73	40.59	44.37	48.18	52.11	60.86
	0.	0.	4.82	-6.07	-11.16	-15.31	-18.93	-22.36	-25.71	-28.99	-32.33	-35.72	-43.09
-160	0.	0.	6.71	16.22	21.76	26.44	30.69	34.68	38.54	42.38	46.25	50.23	59.21
	0.	0.	-0.62	-9.14	-14.09	-18.14	-21.83	-25.33	-28.69	-32.06	-35.45	-38.96	-46.62
-150	0.	0.	6.32	14.36	19.62	24.05	28.14	32.05	35.86	39.66	43.54	47.59	56.74
	0.	0.	-5.11	-12.24	-17.10	-21.20	-24.92	-28.41	-31.85	-35.28	-38.79	-42.43	-50.42
-140	0.	0.	5.63	12.41	17.35	21.61	25.54	29.26	32.93	36.62	40.38	44.34	53.47
	0.	0.	-8.89	-15.67	-20.40	-24.42	-28.13	-31.72	-35.24	-38.78	-42.42	-46.21	-54.74
-130	0.	0.	4.70	10.75	15.35	19.32	23.00	26.57	30.06	33.58	37.21	41.00	49.73
	0.	0.	-12.85	-19.14	-23.76	-27.83	-31.64	-35.31	-38.93	-42.62	-46.42	-50.39	-59.63
-120	0.	0.	3.52	9.11	13.39	17.19	20.74	24.12	27.46	30.82	34.26	37.92	46.29
	0.	0.	-17.00	-22.83	-27.46	-31.61	-35.51	-39.28	-43.06	-46.89	-50.85	-55.02	-64.87
-110	0.	-8.16	2.54	7.60	11.70	15.37	18.72	21.99	25.21	28.47	31.81	35.28	43.37
	0.	-10.97	-21.48	-27.02	-31.64	-35.85	-39.83	-43.71	-47.59	-51.52	-55.57	-59.85	-69.95
-100	0.	-4.77	1.78	6.41	10.33	13.78	17.07	20.28	23.43	26.64	29.89	33.39	41.32
	0.	-18.98	-26.48	-31.77	-36.34	-40.54	-44.52	-48.40	-52.26	-56.16	-60.16	-64.40	-74.27
-90	0.	-4.13	1.36	5.64	9.32	12.70	15.96	19.12	22.29	25.49	28.81	32.34	40.37
	0.	-25.68	-31.88	-36.86	-41.25	-45.32	-49.16	-52.91	-56.63	-60.36	-64.20	-68.25	-77.51
-80	-10.50	-3.32	1.48	5.50	9.04	12.38	15.64	18.83	22.06	25.33	28.79	32.47	41.05
	-23.56	-31.69	-37.13	-41.71	-45.83	-49.64	-53.26	-56.82	-60.32	-63.85	-67.47	-71.23	-79.66
-70	-7.64	-1.97	2.41	6.26	9.80	13.14	16.45	19.73	23.08	26.54	30.13	34.08	43.56
	-30.57	-36.68	-41.54	-45.76	-49.59	-53.14	-56.58	-59.93	-63.23	-66.56	-69.92	-73.47	-81.23
-60	-4.81	0.22	4.38	8.13	11.71	15.17	18.57	22.01	25.51	29.17	33.09	37.35	47.93
	-34.91	-40.33	-44.82	-48.73	-52.35	-55.79	-59.06	-62.25	-65.40	-68.56	-71.78	-75.05	-82.28
-50	-2.05	2.92	7.17	11.05	14.72	18.27	21.82	25.39	29.08	32.97	37.13	41.70	53.35
	-37.09	-42.39	-46.80	-50.73	-54.28	-57.60	-60.81	-63.89	-66.95	-69.98	-73.07	-76.22	-82.97
-40	1.05	6.15	10.52	14.47	18.22	21.89	25.54	29.23	33.07	37.10	41.43	46.22	58.54
	-37.64	-43.21	-47.77	-51.76	-55.40	-58.71	-61.89	-64.98	-67.95	-70.93	-73.91	-76.96	-83.40
-30	3.72	9.13	13.61	17.67	21.52	25.26	28.96	32.73	36.64	40.74	45.16	50.10	62.64
	-36.35	-42.70	-47.72	-51.97	-55.77	-59.20	-62.41	-65.52	-68.49	-71.45	-74.38	-77.38	-83.64
-20	5.56	11.34	16.03	20.21	24.07	27.84	31.60	35.40	39.35	43.55	48.09	53.10	65.38
	-32.48	-40.75	-46.61	-51.37	-55.48	-59.08	-62.40	-65.59	-68.61	-71.58	-74.52	-77.50	-83.71
-10	5.84	12.48	17.45	21.75	25.73	29.53	33.31	37.16	41.15	45.35	49.91	54.94	67.16
	-24.65	-36.55	-44.31	-49.97	-54.46	-58.33	-61.87	-65.20	-68.29	-71.34	-74.33	-77.35	-83.62

* REFER TO FIGURE 30 (RM 63 TMP-2)

*Table 46 (Cont.)

LONG (DEG)	B=0.15 LAT (DEG)	B=0.16 LAT (DEG)	B=0.17 LAT (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
0	3.54 -11.77	12.53 -28.88	17.96 -40.22	22.42 -47.27	26.48 -52.58	30.34 -56.95	34.13 -60.80	38.00 -64.28	42.02 -67.53	46.26 -70.70	50.84 -73.78	55.89 -76.89	67.99 -83.36
10	0. 0.	11.38 -17.77	17.54 -33.10	22.26 -43.24	26.42 -49.91	30.32 -54.89	34.12 -59.03	37.99 -62.76	42.00 -66.26	46.23 -69.59	50.81 -72.83	55.88 -76.09	68.05 -82.90
20	0. 0.	8.38 -8.00	16.23 -23.30	21.28 -36.92	25.57 -45.67	29.50 -51.60	33.32 -56.40	37.17 -60.58	41.14 -64.35	45.32 -67.90	49.88 -71.39	54.94 -74.84	67.38 -82.16
30	0. 0.	0. 0.	13.91 -15.26	19.55 -28.22	23.96 -39.35	27.97 -46.86	31.82 -52.56	35.64 -57.31	39.55 -61.55	43.72 -65.50	48.24 -69.27	53.27 -73.05	65.87 -81.02
40	0. 0.	0. 0.	10.59 -8.78	17.06 -19.96	21.82 -30.55	25.97 -39.83	29.83 -46.85	33.62 -52.56	37.50 -57.48	41.56 -61.97	45.92 -66.23	50.82 -70.41	63.54 -79.30
50	0. 0.	0. 0.	0. 0.	14.24 -12.64	19.50 -21.47	23.74 -30.10	27.66 -38.27	31.44 -45.40	35.21 -51.41	39.14 -56.77	43.37 -61.74	48.06 -66.56	60.27 -76.72
60	0. 0.	0. 0.	0. 0.	10.47 -4.75	16.96 -13.28	21.63 -20.50	25.68 -27.68	29.43 -35.03	33.14 -42.17	36.94 -48.80	40.92 -54.93	45.27 -60.70	56.78 -72.57
70	0. 0.	0. 0.	0. 0.	0. 0.	14.41 -5.71	19.84 -12.49	24.00 -18.53	27.80 -24.54	31.48 -30.89	35.12 -37.64	38.94 -44.61	43.08 -51.61	53.49 -65.82
80	0. 0.	0. 0.	0. 0.	0. 0.	10.72 7.31	18.04 -6.27	22.69 -11.88	26.65 -16.99	30.31 -22.09	33.88 -27.44	37.57 -33.26	41.47 -39.71	51.01 -55.09
90	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	16.73 -1.92	21.86 -7.59	25.97 -12.29	29.64 -16.70	33.19 -21.08	36.80 -25.64	40.54 -30.57	49.55 -42.73
100	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	16.19 0.05	21.62 -5.50	25.83 -9.92	29.54 -13.87	33.10 -17.73	36.70 -21.62	40.40 -25.63	49.23 -34.76
110	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	16.69 0.49	22.15 -4.96	26.38 -9.05	30.16 -12.76	33.74 -16.32	37.37 -19.79	41.14 -23.35	49.91 -31.02
120	0. 0.	0. 0.	0. 0.	0. 0.	0. 0.	18.45 -0.41	23.61 -5.32	27.75 -9.20	31.55 -12.70	35.20 -16.04	38.88 -19.29	42.75 -22.58	51.82 -29.47
130	0. 0.	0. 0.	0. 0.	0. 0.	13.17 5.50	21.12 -1.66	25.90 -6.17	29.98 -9.93	33.72 -13.23	37.42 -16.45	41.16 -19.58	45.03 -22.72	54.26 -29.29
140	0. 0.	0. 0.	0. 0.	0. 0.	18.09 2.35	24.10 -3.28	28.57 -7.39	32.55 -10.98	36.33 -14.25	40.03 -17.38	43.80 -20.46	47.76 -23.56	56.98 -30.01
150	0. 0.	0. 0.	0. 0.	10.53 9.64	21.67 -0.50	26.88 -5.27	31.20 -9.05	35.13 -12.46	38.84 -15.74	42.54 -18.84	46.29 -21.94	50.17 -25.04	59.20 -31.63
160	0. 0.	0. 0.	0. 0.	17.14 3.51	24.13 -2.89	28.98 -7.32	33.16 -11.09	37.04 -14.50	40.77 -17.70	44.43 -20.86	48.15 -23.98	52.03 -27.17	60.79 -33.87
170	0. 0.	0. 0.	0. 0.	19.08 -0.16	25.29 -5.64	30.03 -9.88	34.16 -13.47	38.02 -16.87	41.76 -20.14	45.43 -23.32	49.13 -26.51	52.98 -29.74	61.64 -36.67

* REFER TO FIGURE 30 (RM 63 TMP-2)

*Table 47. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 1800 Kilometers

LONG (DEG)	B=0.15 LAT (DEG)	B=0.16 LAT (DEG)	B=0.17 LAT (DEG)	B=0.18 LAT (DEG)	B=0.19 LAT (DEG)	B=0.20 LAT (DEG)	B=0.21 LAT (DEG)	B=0.22 LAT (DEG)	B=0.23 LAT (DEG)	B=0.24 LAT (DEG)	B=0.25 LAT (DEG)	B=0.26 LAT (DEG)	B=0.28 LAT (DEG)
-180	0. 0. 0.	11.11 3.99 0.	20.94 -5.22 0.	26.67 -10.29 0.	31.49 -14.45 0.	35.87 -18.22 0.	40.00 -21.82 0.	44.00 -25.34 0.	48.03 -28.85 0.	52.17 -32.44 0.	56.55 -36.16 0.	61.42 -40.07 0.	76.50 -49.38 -87.61
-170	0. 0. 0.	11.14 -0.35 0.	19.84 -7.96 0.	25.47 -12.99 0.	30.29 -17.19 0.	34.68 -21.03 0.	38.85 -24.67 0.	42.94 -28.23 0.	47.04 -31.82 0.	51.24 -35.48 0.	55.67 -39.31 0.	60.58 -43.44 0.	75.59 -53.34 -87.19
-160	0. 0. 0.	10.30 -3.71 0.	17.94 -11.01 0.	23.49 -15.93 0.	28.25 -20.14 0.	32.65 -23.94 0.	36.86 -27.63 0.	40.99 -31.27 0.	45.13 -34.92 0.	49.41 -38.71 0.	53.96 -42.70 0.	59.01 -47.01 0.	74.33 -57.82 -86.69
-150	0. 0. 0.	8.82 -7.24 0.	16.03 -14.11 0.	21.29 -18.94 0.	25.90 -23.11 0.	30.19 -27.01 0.	34.30 -30.77 0.	38.39 -34.48 0.	42.54 -38.26 0.	46.85 -42.18 0.	51.46 -46.33 0.	56.62 -50.88 0.	72.50 -63.22 -86.12
-140	0. 0. 0. 0.	7.44 -11.04 0. 0.	14.08 -17.31 0. 0.	19.05 -22.12 0. 0.	23.42 -26.34 0. 0.	27.53 -30.30 0. 0.	31.52 -34.11 0. 0.	35.48 -37.94 0. 0.	39.51 -41.86 0. 0.	43.76 -45.93 0. 0.	48.34 -50.30 0. 0.	53.50 -55.21 0. 0.	69.42 -70.00 -70.00 -85.40
-130	0. 0.	6.25 -14.95	12.19 -20.82	16.90 -25.57	21.09 -29.81	25.01 -33.81	28.79 -37.76	32.60 -41.74	36.49 -45.81	40.54 -50.08	44.93 -54.77	49.93 -60.11	65.62 0.
-120	0. 0.	5.19 -18.69	10.58 -24.53	15.02 -29.26	18.93 -33.57	22.66 -37.71	26.32 -41.80	29.94 -45.91	33.68 -50.15	37.60 -54.67	41.85 -59.62	46.66 -65.36	61.50 0.
-110	-4.19 -14.36	3.97 -22.95	9.04 -28.59	13.22 -33.37	17.03 -37.78	20.66 -42.03	24.16 -46.22	27.70 -50.43	31.30 -54.78	35.04 -59.41	38.17 -64.48	43.81 -70.37	57.88 0.
-100	-3.57 -20.58	3.03 -27.74	7.75 -33.19	11.79 -37.94	15.51 -42.36	19.01 -46.61	22.46 -50.79	25.93 -54.98	29.47 -59.31	33.23 -63.87	37.29 -68.84	41.87 -74.53	55.43 0.
-90	-3.13 -26.52	2.50 -32.90	6.93 -38.05	10.84 -42.65	14.45 -46.94	17.92 -51.06	21.37 -55.10	24.82 -59.15	28.42 -63.30	32.22 -67.65	36.33 -72.36	40.99 -77.69	55.15 0.
-80	-2.41 -32.17	2.59 -37.84	6.78 -42.63	10.60 -46.97	14.16 -51.04	17.66 -54.96	21.15 -58.78	24.68 -62.62	28.40 -66.53	32.35 -70.59	36.67 -74.92	41.65 -79.77	57.97 0.
-70	-1.09 -36.85	3.51 -41.98	7.56 -46.45	11.34 -50.54	14.96 -54.37	18.52 -58.06	22.13 -61.70	25.82 -65.32	29.68 -69.00	33.88 -72.84	38.55 -76.89	44.00 -81.30	64.26 0.
-60	0.95 -40.29	5.45 -45.10	9.47 -49.29	13.26 -53.17	16.98 -56.85	20.67 -60.41	24.42 -63.87	28.33 -67.34	32.47 -70.84	36.96 -74.43	42.04 -78.24	48.13 -82.31	74.10 0.
-50	3.69 -42.23	8.18 -46.96	12.30 -51.16	16.23 -55.02	20.06 -58.58	23.89 -62.04	27.82 -65.42	31.91 -68.76	36.26 -72.14	41.03 -75.57	46.51 -79.15	53.16 -82.98	80.31 0.
-40	6.84 -42.97	11.46 -47.86	15.69 -52.13	19.69 -56.03	23.61 -59.65	27.56 -63.06	31.60 -66.41	35.80 -69.69	40.30 -72.98	45.27 -76.31	51.02 -79.73	57.99 -83.39	83.22 0.
-30	9.91 -42.41	14.60 -47.77	18.87 -52.31	22.94 -56.37	26.93 -60.11	30.93 -63.55	35.00 -66.90	39.31 -70.18	43.94 -73.43	49.03 -76.72	54.81 -80.05	61.83 -83.61	84.49 0.
-20	12.08 -40.48	16.99 -46.65	21.38 -51.69	25.51 -56.05	29.51 -59.98	33.55 -63.53	37.70 -66.95	42.06 -70.27	46.73 -73.53	51.87 -76.82	57.71 -80.14	64.48 -83.67	85.33 0.
-10	13.41 -36.47	18.54 -44.39	23.01 -50.28	27.18 -55.09	31.24 -59.22	35.29 -62.99	39.45 -66.55	43.85 -69.97	48.56 -73.28	53.72 -76.62	59.49 -79.98	66.19 -83.56	85.99 0.

• REFER TO FIGURE 31 (RM 63 IMP-2)

*Table 47 (Cont.)

LONG (DEG)	R=0.15 LAT (DEG)	R=0.16 LAT (DEG)	R=0.17 LAT (DEG)	R=0.18 LAT (DEG)	R=0.19 LAT (DEG)	R=0.20 LAT (DEG)	R=0.21 LAT (DEG)	R=0.22 LAT (DEG)	R=0.23 LAT (DEG)	R=0.24 LAT (DEG)	R=0.25 LAT (DEG)	R=0.26 LAT (DEG)	R=0.28 LAT (DEG)
0	13.72 -29.69	19.21 -40.48	23.79 -47.69	28.02 -53.23	32.11 -57.83	36.18 -61.91	40.34 -65.68	44.72 -69.21	49.44 -72.66	54.61 -76.11	60.39 -79.59	67.06 -83.28	86.35 0.
10	12.86 -20.18	18.97 -34.25	23.75 -43.88	28.04 -50.57	32.16 -55.76	36.24 -60.23	40.40 -64.22	44.77 -67.97	49.49 -71.62	54.66 -75.22	60.47 -78.91	67.17 -82.80	86.48 0.
20	10.87 -11.48	17.81 -25.82	22.88 -38.13	27.30 -46.50	31.45 -52.61	35.52 -57.62	39.66 -62.04	44.03 -66.13	48.74 -70.04	53.91 -73.89	59.73 -77.85	66.57 -82.03	86.42 0.
30	6.33 -3.57	15.91 -18.16	21.33 -30.49	25.88 -40.73	30.07 -48.12	34.13 -53.98	38.27 -58.95	42.59 -63.46	47.24 -67.74	52.39 -71.96	58.28 -76.26	65.18 -80.83	86.21 0.
40	0. 0.	13.00 -11.88 0.	19.19 -22.59 0.	23.91 -32.78 0.	28.17 -41.57 0.	32.27 -48.61 0.	36.36 -54.49 0.	40.59 -59.65 0.	45.11 -64.46 0.	50.15 -69.14 0.	56.03 -73.92 0.	63.15 -79.05 0.	85.85 0.
50	0. 0.	8.92 -5.09	16.62 -15.44	21.73 -24.15	26.13 -32.75	30.23 -40.80	34.26 -47.82	38.42 -54.01	42.84 -59.65	47.71 -65.04	53.35 -70.46	60.25 -76.35	85.27 0.
60	0. 0.	0. 0.	13.70 -8.13	19.64 -16.19	24.18 -23.49	28.31 -30.90	32.32 -38.42	36.36 -45.68	40.57 -52.45	45.16 -58.88	50.49 -65.24	57.19 -72.05	84.47 0.
70	0. 0.	0. 0.	9.41 0.18	17.43 -9.05	22.47 -15.64	26.76 -21.85	30.75 -28.25	34.67 -35.04	38.75 -42.27	43.15 -49.67	48.12 -57.21	54.18 -65.10	83.12 0.
80	0. 0.	0. 0.	0. 0.	15.51 -2.87	21.16 -9.64	25.63 -15.16	29.63 -20.49	33.50 -26.00	37.47 -31.97	41.65 -38.57	46.32 -46.04	51.99 -54.55	80.52 0.
90	0. 0.	0. 0.	0. 0.	13.15 2.02	20.30 -5.60	24.95 -10.83	28.97 -15.58	32.85 -20.22	36.74 -25.01	40.79 -30.18	45.24 -36.03	50.57 -42.92	76.22 -65.08
100	0. 0. 0.	0. 0. 0.	0. 0. 0.	11.51 4.65 0.	20.01 -3.37 0.	24.77 -8.49 0.	28.85 -12.90 0.	32.76 -17.09 0.	36.65 -21.24 0.	40.66 -25.53 0.	45.03 -30.12 0.	50.21 -35.32 0.	72.83 -49.88 -86.16
110	0. 0. 0.	0. 0. 0.	0. 0. 0.	12.01 4.82 0.	20.44 -2.77 0.	25.29 -7.68 0.	29.43 -11.85 0.	33.35 -15.72 0.	37.28 -19.47 0.	41.35 -23.30 0.	45.77 -27.31 0.	50.97 -31.62 0.	71.99 -42.50 -86.99
120	0. 0. 0.	0. 0. 0.	0. 0. 0.	15.11 3.58 0.	21.74 -3.23 0.	26.55 -7.83 0.	30.75 -11.78 0.	34.71 -15.45 0.	38.68 -18.97 0.	42.84 -22.53 0.	47.38 -26.18 0.	52.65 -30.00 0.	72.85 -39.21 -87.61
130	0. 0. 0.	0. 0. 0.	0. 0. 0.	17.82 1.50 0.	23.95 -4.32 0.	28.58 -8.56 0.	32.75 -12.37 0.	36.76 -15.85 0.	40.78 -19.24 0.	44.95 -22.66 0.	49.54 -26.15 0.	54.80 -29.78 0.	74.08 -38.32 -88.04
140	0. 0. 0.	0. 0. 0.	0. 0. 0.	21.13 -0.68 0.	26.54 -5.68 0.	31.04 -9.74 0.	35.18 -13.32 0.	39.17 -16.77 0.	43.22 -20.12 0.	47.45 -23.48 0.	52.04 -26.94 0.	57.30 -30.52 0.	75.11 -38.81 -88.28
150	0. 0. 0.	0. 0. 0.	16.62 4.08 0.	23.98 -2.67 0.	29.02 -7.30 0.	33.38 -11.24 0.	37.48 -14.83 0.	41.48 -18.21 0.	45.48 -21.58 0.	49.65 -24.93 0.	54.17 -28.42 0.	59.28 -32.08 0.	76.21 -40.35 -88.33
160	0. 0. 0.	0. 0. 0.	19.93 0.69 0.	26.02 -5.12 0.	30.88 -9.42 0.	35.20 -13.20 0.	39.24 -16.77 0.	43.20 -20.20 0.	47.20 -23.59 0.	51.33 -27.03 0.	55.73 -30.54 0.	60.70 -34.27 0.	76.75 -42.88 -88.21
170	0. 0. 0.	0. 0. 0.	21.06 -2.14 0.	26.91 -7.50 0.	31.72 -11.78 0.	36.05 -15.61 0.	40.13 0. 0.	44.09 -22.62 0.	48.08 -26.07 0.	52.19 -29.55 0.	56.57 -33.20 0.	61.45 -37.05 0.	76.85 -45.90 -87.96

* REFER TO FIGURE 31 (RM 63 TMP-2)

*Table 48. Constant Magnetic Field Intensity, B (Gauss), in the Region of the South Atlantic Anomaly at Altitude 2000 Kilometers

LONG (DEG)	B=C.15 LAT (DEG)	B=C.16 LAT (DEG)	B=C.17 LAT (DEG)	B=C.18 LAT (DEG)	B=C.19 LAT (DEG)	B=C.20 LAT (DEG)	B=C.21 LAT (DEG)	B=C.22 LAT (DEG)	B=C.23 LAT (DEG)	B=C.24 LAT (DEG)	B=C.25 LAT (DEG)	B=C.26 LAT (DEG)	B=C.28 LAT (DEG)
-180	13.01 1.88 C.	21.99 -6.44 C.	27.83 -11.63 C.	-16.01 C.	17.38 -20.02 C.	41.76 -23.82 C.	46.08 -27.61 C.	50.45 -31.45 C.	55.04 -35.39 C.	60.09 -39.60 C.	66.21 -44.25 C.	74.94 -49.57 C.	C.
-170	12.54 -1.74 C.	20.88 -9.36 C.	26.61 -14.45 C.	31.61 -18.77 C.	36.23 -22.79 C.	40.67 -26.68 C.	45.04 -30.53 C.	49.50 -34.44 C.	54.18 -38.55 C.	59.32 -42.94 C.	65.39 -47.81 C.	74.33 -53.57 C.	C.
-160	11.41 -5.37 C.	19.11 -12.27 C.	24.78 -17.28 C.	29.70 -21.66 C.	34.29 -25.74 C.	38.75 -29.68 C.	43.19 -33.62 C.	47.73 -37.66 C.	52.51 -41.89 C.	57.78 -46.47 C.	64.00 -51.67 C.	73.20 -58.12 C.	C.
-150	10.16 -8.60 C.	17.09 -15.39 C.	22.52 -20.36 C.	27.33 -24.73 C.	31.85 -28.83 C.	36.26 -32.85 C.	40.67 -36.90 C.	45.20 -41.07 C.	50.01 -45.46 C.	55.37 -50.29 C.	61.86 -55.98 C.	71.23 -63.59 C.	C.
-140	8.51 -12.09 C.	15.20 -18.52 C.	20.31 -23.49 C.	24.90 -27.92 C.	29.23 -32.12 C.	33.49 -36.26 C.	37.81 -40.42 C.	42.29 -44.75 C.	47.08 -49.42 C.	52.45 -54.62 C.	58.91 -60.97 C.	68.53 -70.73 C.	C.
-130	7.10 -15.85 C.	13.22 -21.92 C.	18.11 -26.89 C.	22.50 -31.39 C.	26.67 -35.70 C.	30.77 -39.95 C.	34.90 -44.30 C.	39.22 -48.87 C.	43.88 -53.82 C.	49.10 -59.44 C.	55.45 -66.66 C.	64.85 C.	C.
-120	5.91 -19.74 C.	11.51 -25.64 C.	16.15 -30.62 C.	20.36 -35.20 C.	24.34 -39.62 C.	28.27 -44.03 C.	32.26 -48.57 C.	36.42 -53.35 C.	40.87 -58.56 C.	45.91 -64.54 C.	52.11 -72.56 C.	61.15 C.	C.
-110	4.84 -23.84 C.	10.06 -29.71 C.	14.42 -34.72 C.	18.44 -39.37 C.	22.31 -43.91 C.	26.13 -48.44 C.	29.97 -53.08 C.	34.01 -57.97 C.	38.37 -63.30 C.	43.26 -69.42 C.	49.14 -77.70 C.	57.87 C.	C.
-100	3.80 -28.48 C.	8.72 -34.18 C.	12.96 -39.17 C.	16.90 -43.84 C.	20.69 -48.38 C.	24.43 -52.91 C.	28.25 -57.52 C.	32.24 -62.35 C.	36.53 -67.58 C.	41.36 -73.56 C.	47.25 -81.29 C.	55.62 C.	C.
-90	3.24 -33.41 C.	7.89 -38.84 C.	12.02 -43.69 C.	15.90 -48.24 C.	19.64 -52.66 C.	23.39 -57.04 C.	27.23 -61.48 C.	31.24 -66.09 C.	35.57 -71.06 C.	40.48 -76.67 C.	46.57 -83.55 C.	55.31 C.	C.
-80	3.30 -38.11 C.	7.74 -43.20 C.	11.80 -47.81 C.	15.66 -52.15 C.	19.43 -56.36 C.	23.25 -60.52 C.	27.18 -64.71 C.	31.33 -69.08 C.	35.86 -73.73 C.	41.06 -78.85 C.	47.59 -84.82 C.	57.72 C.	C.
-70	4.23 -42.04 C.	8.54 -46.82 C.	12.57 -51.20 C.	16.48 -55.33 C.	20.34 -59.31 C.	24.27 -63.26 C.	28.38 -67.26 C.	32.78 -71.36 C.	37.63 -75.67 C.	43.27 -80.36 C.	50.40 -85.90 C.	62.94 C.	C.
-60	6.09 -45.02 C.	10.42 -49.55 C.	14.50 -53.72 C.	18.49 -57.68 C.	22.51 -61.53 C.	26.62 -65.32 C.	30.93 -69.11 C.	35.57 -73.02 C.	40.78 -77.10 C.	46.99 -81.45 C.	54.99 -86.42 C.	70.03 C.	C.
-50	8.81 -46.79 C.	13.21 -51.31 C.	17.41 -55.46 C.	21.54 -59.34 C.	25.68 -63.07 C.	29.94 -66.76 C.	34.47 -70.43 C.	39.38 -74.16 C.	44.88 -78.05 C.	51.57 -82.16 C.	60.31 -86.68 C.	76.19 C.	C.
-40	12.02 -47.60 C.	16.52 -52.22 C.	20.81 -56.42 C.	25.02 -60.34 C.	29.27 -64.05 C.	33.68 -67.68 C.	38.34 -71.29 C.	43.42 -74.91 C.	49.14 -78.66 C.	56.01 -82.61 C.	64.92 -86.86 C.	79.54 C.	C.
-30	15.15 -47.44 C.	19.69 -52.35 C.	24.01 -56.71 C.	28.28 -60.74 C.	32.60 -64.51 C.	37.06 -68.13 C.	41.80 -71.73 C.	46.97 -75.31 C.	52.81 -78.98 C.	59.63 -82.83 C.	68.42 -86.98 C.	81.59 C.	C.
-20	17.53 -46.29 C.	22.17 -51.69 C.	26.56 -56.36 C.	30.86 -60.58 C.	35.18 -64.46 C.	39.67 -68.16 C.	44.45 -71.79 C.	49.64 -75.38 C.	55.49 -79.04 C.	62.34 -82.88 C.	70.65 -87.07 C.	82.78 C.	C.
-10	19.16 -43.94 C.	23.87 -50.25 C.	28.28 -55.37 C.	32.61 -59.86 C.	36.97 -63.91 C.	41.48 -67.74 C.	46.28 -71.47 C.	51.49 -75.13 C.	57.33 -78.86 C.	64.01 -82.75 C.	72.10 -87.14 C.	83.45 C.	C.
0	19.96 -40.13 C.	24.74 -47.64 C.	29.18 -53.53 C.	33.52 -58.44 C.	37.89 -62.81 C.	42.42 -66.87 C.	47.22 -70.75 C.	52.45 -74.54 C.	58.25 -78.40 C.	64.84 -82.42 C.	72.84 -87.17 C.	83.82 C.	C.

* REFER TO FIGURE 32 (RM 63 IMP-2)

*Table 48 (Cont.)

LONG (DEG)	R=0.15 LAT (DEG)	R=0.16 LAT (DEG)	R=0.17 LAT (DEG)	R=0.18 LAT (DEG)	R=0.19 LAT (DEG)	R=0.20 LAT (DEG)	R=0.21 LAT (DEG)	R=0.22 LAT (DEG)	R=0.23 LAT (DEG)	R=0.24 LAT (DEG)	B=C.25 LAT (DEG)	B=C.26 LAT (DEG)	R=0.28 LAT (DEG)
10	19.85 -34.22	24.80 -43.90	29.29 -50.85	33.64 -56.35	38.01 -61.12	42.53 -65.46	47.33 -69.55	52.55 -73.46	58.17 -77.62	64.99 -81.85	73.03 -87.12	83.98 0.	C. C.
20	18.82 -26.64	24.04 -38.45	28.63 -46.89	33.01 -53.28	37.39 -58.60	41.89 -63.33	46.66 -67.76	51.88 -72.07	57.74 -76.41	64.47 -80.96	72.69 -86.85	83.95 0.	C. C.
30	17.02 -19.52	22.57 -31.40	27.31 -41.36	31.74 -48.95	36.10 -55.08	40.55 -60.36	45.28 -65.22	50.46 -69.91	56.37 -74.62	63.28 -79.61	71.79 -85.71	83.75 0.	C. C.
40	14.67 -13.42 0.	20.67 -24.01 0.	25.54 -34.04 0.	30.00 -42.73 0.	34.34 -49.97 0.	38.77 -56.04 0.	43.45 -61.55 0.	48.55 -66.81 0.	54.34 -72.09 0.	61.34 -77.69 0.	70.19 -84.16 0.	83.31 0.	C. 0. C.
50	11.16 -7.00	18.31 -17.07	23.49 -25.88	28.05 -34.54	32.41 -42.60	36.78 -49.84	41.34 -56.27	46.31 -62.32	51.98 -68.31	58.84 -74.63	66.06 -82.32	82.56 0.	C. 0.
60	0. 0.	15.87 -10.30	21.52 -18.18	26.23 -25.70	30.60 -33.38	34.87 -41.11	39.30 -48.58	44.08 -55.71	49.46 -62.69	56.07 -69.96	65.08 -78.87	81.37 0.	C. 0.
70	0. 0.	12.70 -3.03	19.79 -11.36	24.72 -18.02	29.10 -24.52	33.34 -31.35	37.66 -38.64	42.24 -46.33	47.37 -54.31	53.53 -62.78	62.15 -72.84	79.39 0.	C. C.
80	0. 0.	0. 0.	18.02 -5.76	23.47 -12.10	27.99 -17.82	32.24 -23.51	36.46 -29.50	40.86 -36.13	45.72 -43.63	51.56 -52.31	59.41 -62.89	76.61 0.	0. 0.
90	0. 0. 0.	0. 0. 0.	16.69 -1.59 0.	22.66 -8.09 0.	27.34 -13.39 0.	31.61 -18.38 0.	35.78 -23.41 0.	40.07 -28.75 0.	44.77 -34.64 0.	50.30 -41.64 0.	57.84 -50.37 0.	73.45 -64.04 -85.28	0. 0. 0.
100	0. 0. 0.	0. 0. 0.	16.08 0.59 0.	22.41 -5.96 0.	27.21 -10.97 0.	31.52 -15.53 0.	35.70 -19.95 0.	39.96 -24.49 0.	44.62 -29.34 0.	49.99 -34.73 0.	57.27 -41.25 0.	71.35 -49.88 -86.32	0. 0. 0.
110	0. 0. 0.	0. 0. 0.	16.45 1.24 0.	22.87 -5.29 0.	27.70 -10.04 0.	32.06 -14.25 0.	36.29 -18.33 0.	40.61 -22.43 0.	45.26 -26.68 0.	50.70 -31.26 0.	57.82 -36.46 0.	70.90 -42.85 -87.13	0. 0. C.
120	0. 0. 0.	0. 0. 0.	17.97 0.34 0.	24.18 -5.49 0.	28.95 -10.03 0.	33.31 -14.02 0.	37.60 -17.88 0.	42.00 -21.71 0.	46.76 -25.61 0.	52.24 -29.72 0.	59.21 -34.30 0.	71.76 -35.59 -87.73	0. 0. C.
130	0. 0. 0.	0. 0. 0.	20.50 -0.90 0.	26.13 -6.24 0.	30.85 -10.58 0.	35.22 -14.46 0.	39.51 -18.16 0.	43.96 -21.86 0.	48.76 -25.59 0.	54.23 -29.51 0.	61.21 -33.82 0.	73.00 -38.70 -88.14	-54.15 -72.0. 0.
140	0. 0. 0.	15.11 5.05 0.	23.05 -2.44 0.	28.43 -7.40 0.	33.07 -11.58 0.	37.44 -15.40 0.	41.76 -19.04 0.	46.21 -22.67 0.	50.99 -26.38 0.	56.44 -30.21 0.	63.22 -34.41 0.	74.03 -35.15 -88.36	-53.32 -74.26 C.
150	0. 0. 0.	18.75 2.06 0.	25.61 -4.43 0.	30.70 -9.03 0.	35.25 -13.05 0.	39.55 -16.83 0.	43.85 -20.48 0.	48.28 -24.10 0.	53.01 -27.84 0.	58.31 -31.75 0.	64.71 -35.95 0.	74.73 -40.69 -88.39	-54.64 -75.01 0.
160	0. 0. 0.	21.18 -0.92 0.	27.31 -6.54 0.	32.31 -11.04 0.	36.83 -15.05 0.	41.14 -18.77 0.	45.41 -22.45 0.	49.76 -26.14 0.	54.40 -29.89 0.	59.56 -33.90 0.	65.82 -38.24 0.	75.16 -43.13 -88.26	-58.14 -74.38 0.
170	11.31 6.96 0.	22.17 -3.62 0.	28.11 -9.00 0.	33.07 0. 0.	37.59 -17.36 0.	41.92 -21.16 0.	46.19 -24.87 0.	50.54 -28.63 0.	55.11 -32.51 0.	60.18 -36.60 0.	66.34 -41.05 0.	75.29 -46.14 -88.00	-63.80 -71.56 C.

* REFER TO FIGURE 32 (RM 63 TMP-2)

*Table 49. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 0 Kilometers

LONG (DEG)	B=0.25 LAT (DEG)	B=C.30 LAT (DEG)	B=0.35 LAT (DEG)	B=C.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=0.60 LAT (DEG)	B=C.65 LAT (DEG)
-180	0.	0.	22.80	36.38	45.54	-28.90	-37.22	-47.10	C.
	0.	0.	-1.03	-11.92	-21.61	0.	0.	0.	0.
-170	0.	0.	20.66	33.77	44.62	-33.22	-43.11	0.	C.
	0.	0.	-3.53	-15.16	-24.25	0.	0.	0.	C.
-160	0.	0.	17.70	30.87	41.48	-37.64	-47.80	0.	0.
	0.	0.	-6.61	-18.07	-27.59	0.	0.	0.	0.
-150	0.	0.	14.73	27.70	38.10	47.66	0.	0.	C.
	0.	0.	-10.58	-21.65	-30.84	-40.76	0.	0.	0.
-140	0.	0.	11.72	23.56	33.74	42.67	0.	0.	C.
	0.	0.	-14.21	-25.19	-33.83	-46.59	0.	0.	C.
-130	0.	0.	9.18	20.30	29.21	38.27	48.10	0.	C.
	0.	0.	-17.73	-28.61	-37.86	0.	0.	0.	C.
-120	0.	0.	7.12	17.56	25.68	34.17	43.61	0.	0.
	0.	0.	-21.02	-32.02	-41.54	0.	0.	0.	C.
-110	0.	0.	5.71	15.61	22.92	30.21	39.18	0.	C.
	0.	0.	-25.03	-35.84	-45.59	0.	0.	0.	0.
-100	0.	0.	4.67	13.52	20.49	27.52	35.78	49.26	C.
	0.	0.	-30.28	-41.27	0.	0.	0.	0.	0.
-90	0.	-11.75	3.29	11.75	18.70	26.18	34.75	0.	0.
	0.	-18.70	-37.15	-47.27	0.	0.	0.	0.	C.
-80	0.	-8.71	2.21	10.68	17.98	26.04	35.10	0.	0.
	0.	-32.00	-43.96	C.	0.	0.	0.	0.	C.
-70	0.	-6.63	2.82	11.30	19.04	27.73	37.78	0.	C.
	0.	-40.78	0.	C.	0.	0.	0.	C.	0.
-60	-24.10	-4.67	4.68	13.87	22.15	31.98	44.82	0.	0.
	-31.16	-45.69	C.	C.	0.	0.	0.	0.	0.
-50	-18.09	-2.42	7.84	17.37	26.31	38.22	0.	0.	0.
	-35.49	-47.48	C.	C.	0.	0.	0.	0.	C.
-40	-18.15	0.22	10.77	22.12	32.21	44.81	0.	C.	C.
	-35.43	-48.04	0.	C.	0.	0.	0.	0.	C.
-30	C.	2.49	15.41	27.46	36.16	C.	0.	0.	0.
	0.	-47.89	C.	C.	0.	0.	0.	0.	C.
-20	0.	4.60	19.49	29.09	38.40	C.	0.	0.	0.
	0.	-46.87	0.	C.	0.	C.	0.	C.	0.
-10	0.	0.23	20.19	30.42	42.63	0.	0.	0.	C.
	0.	-1.17	0.	C.	0.	0.	0.	C.	0.
	0.	-19.29	0.	C.	0.	C.	0.	C.	0.
	0.	-45.43	0.	0.	0.	0.	0.	0.	C.

• REFER TO FIGURE 33 (RM 63 IMP-2)

*Table 49 (Cont.)

LONG (DEG)	B=0.25 LAT (DEG)	B=C.30 LAT (DEG)	B=0.35 LAT (DEG)	B=C.40 LAT (DEG)	B=0.45 LAT (DEG)	B=C.50 LAT (DEG)	B=0.55 LAT (DEG)	B=C.60 LAT (DEG)	B=0.65 LAT (DEG)
-0	0. 0.	-32.05 -40.77	18.75 0.	30.79 C.	44.77 0.	0. 0.	0. 0.	0. C.	0. 0.
10	0.	0.	17.14	29.15	43.34	0.	0.	0.	0.
20	0. 0.	0. 0.	16.40 -47.33	28.50 C.	41.34 0.	0. 0.	0. 0.	0. 0.	0. 0.
30	0. 0.	0. 0.	12.24 -43.44	26.19 C.	38.77 0.	0. 0.	0. 0.	0. 0.	0. 0.
40	0. 0. 0. 0.	0. 0. 0. 0.	8.30 -15.01 -22.74 -37.04	23.24 C. C. C.	34.82 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. 0.	0. 0. 0. C.
50	0. 0.	0. 0.	4.60 -1.74	20.67 -47.05	31.22 0.	44.33 0.	0. 0.	0. 0.	0. 0.
60	0. 0.	0. 0.	C. 0.	17.73 -37.83	27.81 0.	38.77 0.	0. 0.	0. 0.	0. 0.
70	0. 0.	0. 0.	0. 0.	15.62 -17.74	25.71 -40.90	36.01 0.	48.61 0.	0. C.	C. 0.
80	0. 0.	0. 0.	0. C.	11.77 -3.19	23.76 -24.03	34.30 -44.40	44.43 0.	0. 0.	0. 0.
90	0. 0.	0. 0.	0. C.	C. C.	22.71 -13.19	32.44 -29.11	41.68 0.	0. C.	0. 0.
100	0. 0.	0. 0.	0. 0.	C. C.	23.14 -9.53	31.52 -21.16	39.70 -33.74	0. 0.	0. 0.
110	0. 0.	0. 0.	C. C.	C. 0.	23.92 -9.24	32.02 -18.13	40.08 -26.99	-43.81 0.	C. 0.
120	0. 0.	0. 0.	C. 0.	13.52 1.11	25.93 -10.16	34.19 -17.81	42.66 -25.64	-35.29 0.	0. C.
130	0. 0.	0. 0.	C. 0.	18.51 -1.84	29.20 -11.04	37.48 -18.83	46.32 -26.63	-34.61 0.	-48.97 C.
140	0. 0.	0. 0.	0. C.	23.62 -3.48	33.44 -11.96	42.64 -19.72	-27.01 0.	-34.64 0.	-47.75 0.
150	0. 0.	0. 0.	0. 0.	28.38 -5.33	39.09 -13.66	47.59 -21.14	-28.01 C.	-37.66 0.	C. 0.
160	0. 0.	0. 0.	19.45 4.88	32.67 -7.11	42.56 -15.95	-23.26 0.	-29.81 0.	-42.65 0.	0. 0.
170	0. 0.	0. 0.	22.46 2.01	35.72 -8.85	44.46 -18.56	-25.84 0.	-32.65 0.	-44.95 0.	C. 0.

* REFER TO FIGURE 33 (RM 63 TMP-2)

*Table 50. Constant Magnetic Shell Parameter, L (Earth Radii), at Altitude 0 Kilometers

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)
-180	11.38 -6.43	22.43 -15.95	31.49 -23.55	40.64 -31.33	46.32 -36.45	-40.40 0.	-45.91 0.	0. 0.	0. 0.
-170	9.72 -7.55	20.76 -17.30	29.91 -25.15	38.98 -32.87	45.00 -38.19	49.07 -42.15	-47.90 0.	0. 0.	0. 0.
-160	7.94 -8.36	19.13 -18.56	28.09 -26.42	37.16 -34.62	43.05 -40.12	47.26 -44.14	0. 0.	0. 0.	0. 0.
-150	6.39 -8.69	17.75 -19.79	26.57 -27.85	35.54 -36.19	41.26 -41.72	45.52 -45.97	0. 0.	0. 0.	0. 0.
-140	5.14 -8.82	16.55 -20.65	25.28 -29.31	33.76 -37.80	39.47 -43.56	43.46 -47.89	49.26 0.	0. 0.	0. 0.
-130	3.21 -8.34	15.52 -21.51	23.84 -30.64	32.03 -39.61	37.42 -45.54	41.40 0.	46.96 0.	0. 0.	0. 0.
-120	1.21 -8.03	14.21 -22.50	22.34 -31.93	30.45 -41.32	35.61 -47.47	39.47 0.	45.02 0.	48.62 0.	0. 0.
-110	-0.68 -8.19	12.54 -23.67	20.82 -33.55	28.58 -43.29	33.61 -49.76	37.28 0.	42.62 0.	46.37 0.	0. 0.
-100	0. 0.	10.67 -25.23	18.89 -35.47	26.60 -45.49	31.60 0.	35.43 0.	40.69 0.	44.45 0.	49.50 0.
-90	0. 0.	7.71 -26.53	16.41 -37.28	24.53 -47.41	29.73 0.	33.44 0.	38.89 0.	42.56 0.	47.67 0.
-80	0. 0.	4.08 -27.32	13.56 -38.90	22.17 -49.15	27.71 0.	31.78 0.	37.49 0.	41.47 0.	46.76 0.
-70	0. 0.	-0.48 -27.14	10.84 -39.76	20.59 0.	26.59 0.	31.04 0.	37.13 0.	41.35 0.	46.88 0.
-60	0. 0.	-4.93 -25.61	9.41 -39.40	20.42 0.	27.02 0.	31.75 0.	38.24 0.	42.58 0.	48.34 0.
-50	0. 0.	-2.90 -22.71	11.14 -37.59	22.73 -49.18	29.60 0.	34.21 0.	40.65 0.	45.11 0.	0. 0.
-40	0. 0.	5.55 -20.16	17.51 -34.62	27.00 -46.85	33.26 0.	37.65 0.	43.62 0.	47.70 0.	0. 0.
-30	0. 0.	14.38 -16.75	23.94 -30.37	31.90 -43.27	37.01 0.	41.12 0.	46.61 0.	0. 0.	0. 0.
-20	0. 0.	21.02 -12.72	28.89 -25.26	35.88 -38.18	40.47 -47.12	44.07 0.	49.23 0.	0. 0.	0. 0.
-10	10.44 9.57	24.96 -8.54	31.70 -19.91	38.25 -32.44	42.70 -41.84	46.21 -49.01	0. 0.	0. 0.	0. 0.

* REFER TO FIGURE 33 (RM 63 TMP-2)

*Table 50 (Cont.)

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)
-0	16.20 6.12	26.45 -6.55	33.21 -16.40	39.82 -27.67	44.23 -36.67	47.67 -44.10	0. 0.	0. 0.	0. 0.
10	17.84 4.10	27.29 -6.46	34.01 -15.11	40.21 -25.06	45.12 -33.11	48.74 -40.07	0. 0.	0. 0.	0. 0.
20	18.71 2.81	27.56 -6.79	34.35 -14.87	41.02 -24.06	45.69 -31.45	49.49 -37.65	-47.02 0.	0. 0.	0. 0.
30	18.94 1.11	27.38 -7.59	34.36 -15.40	41.30 -24.09	46.11 -30.85	49.93 -36.45	-45.05 0.	0. 0.	0. 0.
40	18.78 -0.37	27.04 -8.82	34.04 -16.26	41.23 -24.60	46.17 -30.74	-35.80 0.	-43.50 0.	-49.19 0.	0. 0.
50	18.76 -1.60	26.85 -10.10	33.83 -17.10	41.20 -25.17	46.24 -30.88	-35.52 0.	-42.44 0.	-47.56 0.	0. 0.
60	19.99 -3.07	27.30 -10.82	34.17 -17.64	41.42 -25.43	46.45 -30.88	-35.24 0.	-41.57 0.	-46.26 0.	0. 0.
70	21.16 -4.00	28.11 -11.14	34.84 -17.85	41.87 -25.45	46.80 -30.68	-34.80 0.	-40.71 0.	-45.11 0.	0. 0.
80	22.62 -4.50	29.27 -11.23	35.59 -17.82	42.42 -25.26	47.21 -30.33	-34.14 0.	-39.87 0.	-43.75 0.	-49.41 0.
90	23.80 -4.78	30.17 -11.27	36.14 -17.73	42.85 -25.04	47.55 -30.00	-33.56 0.	-38.98 0.	-42.68 0.	-47.94 0.
100	24.07 -5.17	30.43 -11.59	36.41 -18.00	43.11 -25.12	47.79 -29.91	-33.31 0.	-38.45 0.	-42.02 0.	-47.00 0.
110	23.31 -5.69	30.13 -12.27	36.35 -18.68	43.22 -25.51	47.96 -30.15	-33.40 0.	-38.33 0.	-41.79 0.	-46.57 0.
120	22.04 -6.14	29.38 -13.00	36.09 -19.45	43.25 -26.02	48.13 -30.56	-33.86 0.	-38.66 0.	-41.98 0.	-46.61 0.
130	20.85 -6.11	28.65 -13.34	35.82 -19.96	43.26 -26.53	48.30 -31.09	-34.56 0.	-39.33 0.	-42.52 0.	-47.06 0.
140	19.64 -5.56	28.04 -13.26	35.58 -20.15	43.28 -26.96	48.46 -31.63	-35.23 0.	-40.15 0.	-43.38 0.	-47.96 0.
150	17.89 -4.69	27.27 -13.09	35.22 -20.37	43.13 -27.52	48.45 -32.33	-35.95 0.	-40.99 0.	-44.70 0.	-49.45 0.
160	16.08 -4.39	26.11 -13.39	34.42 -20.93	42.66 -28.49	48.10 -33.42	-37.02 0.	-42.25 0.	-46.01 0.	0. 0.
170	13.69 -5.68	24.38 -14.52	33.08 -21.94	41.82 -29.91	47.38 -34.96	-38.53 0.	-43.99 0.	-47.71 0.	0. 0.

• REFER TO FIGURE 33 (RM 63 TMP-2)

*Table 51. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 500 Kilometers

LONG (LEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
-180	0. 0.	28.67 -8.29	41.75 -20.29	-30.15 0.	-41.31 0.	0. 0.
-170	0. 0.	26.81 -11.26	40.55 -23.12	-34.04 0.	-45.61 0.	0. 0.
-160	0. 0.	24.34 -14.26	38.03 -26.29	-38.00 0.	0. 0.	0. 0.
-150	0. 0.	21.40 -17.46	35.00 -29.56	47.41 -41.73	0. 0.	0. 0.
-140	0. 0.	18.40 -20.85	31.25 -32.84	43.19 -46.07	0. 0.	0. 0.
-130	0. 0.	15.78 -24.20	27.61 -36.48	35.07 -49.83	0. 0.	0. 0.
-120	0. 0.	13.48 -27.60	24.54 -40.17	35.29 0.	48.51 0.	0. 0.
-110	0. 0.	11.66 -31.54	22.03 -44.33	31.97 0.	44.36 0.	0. 0.
-100	-6.09 -17.26	10.14 -36.56	19.93 -49.28	29.46 0.	41.49 0.	0. 0.
-90	-4.94 -25.91	8.71 -42.42	18.42 0.	28.23 0.	40.23 0.	0. 0.
-80	-4.44 -34.29	7.93 -48.22	17.85 0.	28.20 0.	41.26 0.	0. 0.
-70	-3.26 -41.02	8.52 0.	18.78 0.	29.80 0.	45.34 0.	0. 0.
-60	-1.40 -45.27	10.58 0.	21.42 0.	33.60 0.	0. 0.	0. 0.
-50	1.19 -47.14	13.68 0.	25.23 0.	38.98 0.	0. 0.	0. 0.
-40	4.10 -47.76	17.56 0.	30.14 0.	44.71 0.	0. 0.	0. 0.
-30	7.29 -47.43	22.16 0.	34.19 0.	0. 0.	0. 0.	0. 0.
-20	10.37 -46.14	25.07 0.	36.88 0.	0. 0.	0. 0.	0. 0.
-10	11.10 -43.54	26.40 0.	39.29 0.	0. 0.	0. 0.	0. 0.

* REFER TO FIGURE 34 (RM 63 TMP-2)

*Table 51 (Cont.)

LONG (DEG)	R=0.25 LAT (DEG)	R=0.30 LAT (DEG)	R=0.35 LAT (DEG)	R=0.40 LAT (DEG)	R=0.45 LAT (DEG)	R=0.50 LAT (DEG)
-0	9.11 37.52	26.55 C.	40.62 0.	C. 0.	0. 0.	0. 0.
10	0.	25.74	40.15	C.	0.	0.
20	0.	24.85	38.91	C.	0.	0.
30	0. 0.	22.86 -46.62	36.91 C.	C. C.	0. 0.	0. 0.
40	0. 0.	20.44 -40.90	34.12 C.	C. C.	0. 0.	0. 0.
50	0. 0.	17.84 -30.93	31.22 C.	46.37 C.	0. 0.	0. 0.
60	0. 0.	15.18 -16.43	28.51 -45.33	42.01 C.	0. 0.	0. 0.
70	0. C.	11.68 -5.74	26.50 -33.09	39.01 C.	0. 0.	0. 0.
80	0. 0.	0. 0.	24.87 -20.86	37.07 -43.18	0. 0.	0. 0.
90	0. 0.	0. 0.	23.79 -13.06	35.48 -30.47	48.49 0.	0. 0.
100	0. 0.	0. 0.	23.69 -9.66	34.65 -23.54	46.98 -41.92	C. 0.
110	0. 0.	0. 0.	24.34 -8.91	35.07 -20.43	47.41 -33.12	0. C.
120	0. 0.	0. 0.	25.99 -9.52	36.88 -19.79	49.28 -30.59	0. 0.
130	0. 0.	10.89 6.30	28.72 -10.46	39.76 -20.38	-30.41 0.	-44.39 0.
140	0. 0.	17.80 1.50	32.30 -11.49	43.75 -21.20	-30.86 0.	-44.07 C.
150	C. 0.	22.59 -1.11	36.28 -13.02	47.55 -22.54	-32.31 0.	-46.31 0.
160	0. 0.	26.25 -3.33	39.41 -15.07	-24.52 C.	-34.57 0.	-48.23 0.
170	0. 0.	28.45 -5.65	41.23 -17.39	-27.05 C.	-37.58 0.	-49.82 0.

• REFER TO FIGURE 34 (RM 63 TMP-2)

*Table 52. Constant Magnetic Shell Parameter, L (Earth Radii), at Altitude 500 Kilometers

LONG (DEG)	L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
-180	0.	15.15	26.90	37.24	43.62	48.02	-44.14	-48.17	0.	0.
	0.	-8.49	-19.12	-28.20	-34.01	-38.13	0.	0.	0.	0.
-170	0.	13.02	25.30	35.71	42.06	46.61	-46.08	0.	0.	0.
	0.	-9.97	-20.60	-29.94	-35.72	-40.11	0.	0.	0.	0.
-160	0.	11.36	23.51	33.97	40.46	45.10	-48.08	0.	0.	0.
	0.	-10.85	-21.91	-31.40	-37.39	-41.81	0.	0.	0.	0.
-150	0.	10.05	21.95	32.17	38.57	43.07	49.41	0.	0.	0.
	0.	-11.59	-23.28	-33.02	-39.26	-43.74	0.	0.	0.	0.
-140	0.	8.32	20.58	30.57	36.67	41.14	47.22	0.	0.	0.
	0.	-12.24	-24.69	-34.79	-41.04	-45.72	0.	0.	0.	0.
-130	0.	6.85	19.15	28.84	34.97	39.20	45.28	49.37	0.	0.
	0.	-12.88	-25.89	-36.33	-42.86	-47.65	0.	0.	0.	0.
-120	0.	5.43	17.52	27.05	32.89	37.08	42.97	47.00	0.	0.
	0.	-13.66	-27.15	-38.04	-44.96	-49.87	0.	0.	0.	0.
-110	0.	3.22	15.87	25.38	31.02	35.24	40.93	45.08	0.	0.
	0.	-14.57	-28.66	-40.04	-46.83	0.	0.	0.	0.	0.
-100	0.	0.56	13.80	23.27	29.06	33.10	38.94	42.86	48.26	0.
	0.	-15.15	-30.39	-41.84	-48.89	0.	0.	0.	0.	0.
-90	0.	-4.06	11.22	21.10	26.96	31.23	37.10	41.22	46.65	0.
	0.	-14.88	-31.87	-43.71	0.	0.	0.	0.	0.	0.
-80	0.	0.	8.20	18.90	25.27	29.77	35.89	40.26	45.84	49.74
	0.	0.	-33.05	-45.25	0.	0.	0.	0.	0.	0.
-70	0.	0.	5.38	17.11	24.05	28.86	35.55	40.12	45.91	49.99
	0.	0.	-33.46	-45.95	0.	0.	0.	0.	0.	0.
-60	0.	0.	3.61	16.84	24.38	29.54	36.38	41.06	47.05	0.
	0.	0.	-32.73	-45.86	0.	0.	0.	0.	0.	0.
-50	0.	0.	5.53	19.02	26.51	31.65	38.61	43.20	49.34	0.
	0.	0.	-30.89	-44.79	0.	0.	0.	0.	0.	0.
-40	0.	0.	11.01	23.19	30.29	35.19	41.56	46.01	0.	0.
	0.	0.	-27.77	-42.29	0.	0.	0.	0.	0.	0.
-30	0.	0.	17.52	28.15	34.22	38.54	44.73	48.79	0.	0.
	0.	0.	-23.87	-38.73	-47.39	0.	0.	0.	0.	0.
-20	0.	0.	22.99	32.11	37.52	41.52	47.20	0.	0.	0.
	0.	0.	-19.30	-34.03	-43.37	0.	0.	0.	0.	0.
-10	0.	13.11	26.46	35.04	40.13	43.90	49.50	0.	0.	0.
	0.	3.31	-14.87	-28.89	-38.52	-45.74	0.	0.	0.	0.

* REFER TO FIGURE 34 (RM 63 TMP-2)

*Table 52 (Cont.)

LONG (DEG)	L=1.00 LAT (CEG)	L=1.10 LAT (DEG)	L=1.25 LAT (CEG)	L=1.50 LAT (CEG)	L=1.75 LAT (CEG)	L=2.00 LAT (CEG)	L=2.50 LAT (CEG)	L=3.00 LAT (CEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
-0	0. C.	16.82 2.67	28.35 -11.99	36.51 -24.82	41.59 -33.98	45.54 -41.24	C. 0.	0. C.	0. 0.	0. 0.
10	0. 0.	18.69 1.70	29.49 -11.03	37.20 -22.44	42.41 -30.86	46.54 -37.65	-47.79 0.	0. 0.	0. 0.	0. 0.
20	0. 0.	19.78 0.42	30.02 -10.99	38.05 -21.60	43.36 -29.33	47.28 -35.57	-45.01 C.	0. 0.	0. 0.	0. 0.
30	C. C.	20.07 -0.74	30.07 -11.51	38.35 -21.59	43.79 -28.73	47.75 -34.45	-42.93 0.	-49.17 0.	0. 0.	0. 0.
40	0. 0.	20.10 -1.90	29.96 -12.37	38.39 -21.98	43.97 -28.63	48.01 -33.83	-41.60 C.	-47.23 C.	0. 0.	0. 0.
50	0. 0.	20.28 -3.30	30.00 -13.26	38.48 -22.43	44.16 -28.71	48.24 -33.50	-40.69 C.	-45.85 0.	0. 0.	0. 0.
60	0. 0.	21.01 -4.69	30.36 -13.89	38.81 -22.68	44.47 -28.66	48.52 -33.16	-39.96 0.	-44.70 0.	0. 0.	0. 0.
70	0. C.	22.19 -5.39	30.99 -14.21	39.37 -22.68	44.93 -28.44	48.88 -32.71	-39.02 0.	-43.42 C.	-49.67 0.	0. 0.
80	0. C.	23.58 -5.70	31.80 -14.23	40.03 -22.48	45.32 -28.05	49.27 -32.17	-38.13 0.	-42.30 C.	-48.05 0.	0. 0.
90	0. 0.	24.70 -5.90	32.45 -14.22	40.44 -22.30	45.65 -27.71	49.62 -31.72	-37.41 C.	-41.44 0.	-46.85 0.	0. 0.
100	10.83 8.63	25.04 -6.22	32.75 -14.50	40.67 -22.37	45.87 -27.62	49.89 -31.51	-36.99 C.	-40.91 0.	-46.09 0.	-49.77 0.
110	C. 0.	24.60 -6.69	32.63 -15.07	40.75 -22.73	46.01 -27.84	-31.60 0.	-36.91 0.	-40.73 C.	-45.75 0.	-49.13 0.
120	C. C.	23.65 -7.10	32.29 -15.54	40.72 -23.24	46.10 -28.29	-31.94 0.	-37.16 C.	-40.88 0.	-45.79 0.	-49.06 0.
130	0. 0.	22.66 -7.15	31.88 -15.84	40.64 -23.74	46.16 -28.83	-32.46 0.	-37.67 C.	-41.32 0.	-46.18 0.	-49.58 0.
140	C. 0.	21.70 -6.82	31.48 -15.96	40.52 -24.19	46.16 -29.44	-33.10 C.	-38.43 C.	-42.04 0.	-46.94 0.	0. 0.
150	C. 0.	20.63 -6.40	30.94 -16.11	40.27 -24.79	46.02 -30.18	-33.99 0.	-39.52 0.	-43.15 0.	-48.18 0.	0. 0.
160	C. C.	19.03 -6.45	30.11 -16.60	39.68 -25.57	45.63 -31.06	49.99 -35.19	-40.72 C.	-44.73 0.	-49.99 0.	0. 0.
170	C. 0.	16.95 -7.31	28.58 -17.62	38.62 -26.68	44.93 -32.33	49.18 -36.45	-42.20 C.	-46.24 0.	0. 0.	0. 0.

* REFER TO FIGURE 34 (RM 63 TMP-2)

*Table 53. Constant Magnetic Field Intensity, B (Gauss), at
Altitude 0 Kilometers

LONG (DEG)		B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=0.60 LAT (DEG)	B=0.65 LAT (DEG)
-180	*C	0.	0.	22.32	36.26	45.78	-28.41	-37.24	-47.64	0.
	*W	0.	0.	22.80	36.38	45.54	-28.90	-37.22	-47.10	0.
	*C	0.	0.	-0.09	-11.75	-20.27	0.	0.	0.	0.
	*W	0.	0.	-1.03	-11.92	-21.61	0.	0.	0.	0.
	*C	0.	0.	20.18	34.58	44.51	-31.58	-40.54	0.	0.
	*W	0.	0.	20.66	33.77	44.62	-33.22	-43.11	0.	0.
-170	*C	0.	0.	-2.70	-14.65	-23.24	0.	0.	0.	0.
	*W	0.	0.	-3.53	-15.16	-24.25	0.	0.	0.	0.
	*C	0.	0.	17.15	31.33	41.56	-34.68	-43.72	0.	0.
	*W	0.	0.	17.70	30.87	41.48	-37.64	-47.80	0.	0.
	*C	0.	0.	-6.07	-17.58	-26.28	0.	0.	0.	0.
	*W	0.	0.	-6.61	-18.07	-27.59	0.	0.	0.	0.
-160	*C	0.	0.	14.89	27.61	37.52	47.10	-46.99	0.	0.
	*W	0.	0.	14.73	27.70	38.10	47.66	0.	0.	0.
	*C	0.	0.	-9.85	-20.84	-29.48	-37.90	0.	0.	0.
	*W	0.	0.	-10.58	-21.65	-30.84	-40.76	0.	0.	0.
	*C	0.	0.	12.66	24.15	33.26	42.28	0.	0.	0.
	*W	0.	0.	11.72	23.56	33.74	42.67	0.	0.	0.
-150	*C	0.	0.	-13.59	-24.30	-32.90	-41.37	0.	0.	0.
	*W	0.	0.	-14.21	-25.19	-33.83	-46.59	0.	0.	0.
	*C	0.	0.	10.84	21.08	29.41	37.65	47.38	0.	0.
	*W	0.	0.	9.18	20.30	29.21	38.27	48.10	0.	0.
	*C	0.	0.	-17.51	-27.94	-36.64	-45.29	0.	0.	0.
	*W	0.	0.	-17.73	-28.61	-37.86	0.	0.	0.	0.
-140	*C	0.	0.	8.92	18.34	26.10	33.68	42.38	0.	0.
	*W	0.	0.	7.12	17.56	25.68	34.17	43.61	0.	0.
	*C	0.	0.	-21.52	-31.96	-40.94	-49.92	0.	0.	0.
	*W	0.	0.	-21.02	-32.02	-41.54	0.	0.	0.	0.
	*C	0.	0.	6.95	15.90	23.26	30.44	38.51	0.	0.
	*W	0.	0.	5.71	15.61	22.92	30.21	39.18	0.	0.

* REFER TO FIGURE 35 (RM 63 IMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 53 (Cont.)

LONG (DEG)		B=0.75 LAT (DEG)	B=C.30 LAT (DEG)	B=0.35 LAT (DEG)	B=C.40 LAT (DEG)	B=0.45 LAT (DEG)	B=C.50 LAT (DEG)	B=C.55 LAT (DEG)	B=0.60 LAT (DEG)	B=C.65 LAT (DEG)
-100	*C	0.	0.	-26.03	-36.73	-46.03	0.	0.	0.	0.
	*W	0.	0.	-25.03	-35.84	-45.59	0.	0.	0.	0.
	*C	0.	0.	5.21	13.64	20.86	27.92	35.77	47.46	0.
	*W	0.	0.	4.67	13.52	20.49	27.52	35.78	49.26	0.
	*C	0.	0.	-31.75	-42.51	0.	0.	0.	0.	0.
	*W	0.	0.	-30.28	-41.27	0.	0.	0.	0.	0.
-90	*C	0.	-10.57	3.61	11.82	19.00	26.19	34.28	46.77	0.
	*W	0.	-11.75	3.29	11.75	18.70	26.18	34.75	0.	0.
	*C	0.	-21.84	-38.76	-48.62	0.	0.	0.	0.	0.
	*W	0.	-18.70	-37.15	-47.27	0.	0.	0.	0.	0.
	*C	0.	-8.05	2.92	10.86	18.14	25.68	34.57	0.	0.
	*W	0.	-8.71	2.21	10.68	17.98	26.04	35.10	0.	0.
-80	*C	0.	-33.25	-45.47	0.	0.	0.	0.	0.	0.
	*W	0.	-32.00	-43.96	0.	0.	0.	0.	0.	0.
	*C	0.	-6.10	3.44	11.30	18.91	27.22	37.84	0.	0.
	*W	0.	-6.63	2.82	11.30	19.04	27.73	37.78	0.	0.
	*C	0.	-41.04	0.	0.	0.	0.	0.	0.	0.
	*W	0.	-40.78	0.	0.	0.	0.	0.	0.	0.
-60	*C	-20.78	-3.83	5.47	13.62	21.93	31.46	45.40	0.	0.
	*W	-24.10	-4.67	4.68	13.87	22.15	31.98	44.82	0.	0.
	*C	-30.16	-46.01	0.	0.	0.	0.	0.	0.	0.
	*W	-31.16	-45.69	0.	0.	0.	0.	0.	0.	0.
	*C	-16.32	-0.89	8.94	17.81	27.06	38.27	0.	0.	0.
	*W	-18.09	-2.42	7.84	17.37	26.31	38.22	0.	0.	0.
-50	*C	-36.10	-49.06	0.	0.	0.	0.	0.	0.	0.
	*W	-35.49	-47.48	0.	0.	0.	0.	0.	0.	0.
	*C	-16.36	2.36	13.24	22.83	32.93	46.02	0.	0.	0.
	*W	-18.15	0.22	10.77	22.12	32.21	44.81	0.	0.	0.
	*C	-37.08	0.	0.	0.	0.	0.	0.	0.	0.
	*W	-35.43	-48.04	0.	0.	0.	0.	0.	0.	0.
-30	*C	0.	5.20	17.03	27.10	37.88	0.	0.	0.	0.
	*W	0.	2.49	15.41	27.46	36.16	0.	0.	0.	0.

* REFER TO FIGURE 35 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 53 (Cont.)

LONG (DEG)		B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=C.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=C.60 LAT (DEG)	B=0.65 LAT (DEG)
	*C	0.	0.	0.	C.	0.	0.	0.	C.	0.
	*W	0.	-47.89	C.	C.	0.	0.	0.	C.	0.
-20	*C	0.	6.13	19.33	29.72	41.18	0.	0.	0.	0.
	*W	0.	4.60	19.49	29.09	38.40	C.	0.	0.	0.
	*C	0.	0.	C.	C.	0.	0.	C.	0.	C.
	*W	C.	-46.87	C.	C.	0.	0.	0.	0.	0.
-10	*C	0.	4.13	20.09	30.85	42.92	0.	0.	0.	C.
	*W	C.	0.23	20.19	30.42	42.63	0.	0.	0.	0.
	*C	0.	0.	0.	C.	0.	0.	0.	0.	C.
	*W	0.	-1.17	0.	C.	0.	0.	0.	0.	C.
	*C	0.	C.	C.	C.	0.	0.	0.	C.	C.
	*W	0.	-19.29	0.	C.	0.	C.	0.	0.	0.
	*C	0.	0.	C.	C.	0.	0.	0.	C.	C.
	*W	0.	-45.43	0.	C.	0.	C.	0.	0.	0.
0	*C	0.	-25.50	19.61	30.85	43.16	0.	0.	0.	C.
	*W	0.	-32.05	18.75	30.79	44.77	0.	0.	0.	C.
	*C	0.	-47.84	C.	C.	0.	0.	0.	0.	C.
	*W	0.	-40.77	C.	C.	0.	0.	0.	0.	C.
10	*C	0.	-38.79	18.01	29.95	42.09	0.	0.	0.	C.
	*W	0.	0.	17.14	29.15	43.34	0.	0.	0.	C.
	*C	0.	-41.52	0.	C.	0.	C.	0.	0.	C.
	*W	0.	0.	C.	C.	0.	0.	0.	0.	C.
20	*C	0.	0.	15.41	28.12	39.71	0.	0.	0.	C.
	*W	0.	0.	16.40	28.50	41.34	0.	0.	0.	C.
	*C	0.	0.	0.	C.	0.	0.	0.	C.	C.
	*W	0.	0.	-47.33	C.	0.	0.	0.	0.	C.
30	*C	0.	C.	11.28	25.38	36.43	0.	0.	C.	C.
	*W	0.	0.	12.24	26.19	38.77	C.	0.	0.	C.
	*C	0.	0.	0.	C.	0.	0.	0.	0.	C.
	*W	0.	0.	-43.44	C.	0.	0.	0.	C.	C.

* REFER TO FIGURE 35 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 53 (Cont.)

LONG (DEG)		B=0.25 LAT (DEG)	B=C.30 LAT (DEG)	B=0.35 LAT (DEG)	B=C.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=0.60 LAT (DEG)	B=C.65 LAT (DEG)
40	*C	0.	0.	6.46	22.00	32.52	45.82	0.	0.	0.
	*W	0.	0.	8.30	23.24	34.82	0.	0.	0.	0.
	*C	0.	0.	-47.22	0.	0.	0.	0.	0.	0.
	*W	0.	0.	-15.01	0.	0.	0.	0.	0.	0.
	*C	0.	0.	0.	0.	0.	0.	0.	0.	0.
	*W	0.	0.	-22.74	0.	0.	0.	0.	0.	0.
	*C	0.	0.	0.	0.	0.	0.	0.	0.	0.
	*W	0.	0.	-37.04	0.	0.	0.	0.	0.	0.
50	*C	0.	0.	0.	18.72	28.78	39.83	0.	0.	0.
	*W	0.	0.	4.60	20.67	31.22	44.33	0.	0.	0.
	*C	0.	0.	0.	0.	0.	0.	0.	0.	0.
	*W	0.	0.	-1.74	-47.05	0.	0.	0.	0.	0.
60	*C	0.	0.	0.	15.83	25.89	35.61	0.	0.	0.
	*W	0.	0.	0.	17.73	27.81	38.77	0.	0.	0.
	*C	0.	0.	0.	-37.57	0.	0.	0.	0.	0.
	*W	0.	0.	0.	-37.83	0.	0.	0.	0.	0.
70	*C	0.	0.	0.	12.64	23.88	32.90	43.98	0.	0.
	*W	0.	0.	0.	15.62	25.71	36.01	48.61	0.	0.
	*C	0.	0.	0.	-9.20	-39.33	0.	0.	0.	0.
	*W	0.	0.	0.	-17.74	-40.90	0.	0.	0.	0.
80	*C	0.	0.	0.	5.14	22.55	31.26	40.59	0.	0.
	*W	0.	0.	0.	11.77	23.76	34.30	44.43	0.	0.
	*C	0.	0.	0.	4.92	-16.35	-39.03	0.	0.	0.
	*W	0.	0.	0.	-3.19	-24.03	-44.40	0.	0.	0.
90	*C	0.	0.	0.	0.	21.81	30.39	38.97	0.	0.
	*W	0.	0.	0.	0.	22.71	32.44	41.68	0.	0.
	*C	0.	0.	0.	0.	-9.39	-22.22	-40.84	0.	0.
	*W	0.	0.	0.	0.	-13.19	-29.11	0.	0.	0.
100	*C	0.	0.	0.	0.	21.79	30.29	38.61	-47.20	0.
	*W	0.	0.	0.	0.	23.14	31.52	39.70	0.	0.

* REFER TO FIGURE 35 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 53 (Cont.)

LONG (DEG)		B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)	B=0.55 LAT (DEG)	B=0.60 LAT (DEG)	B=0.65 LAT (DEG)
	*C	0.	0.	0.	0.	-7.38	-17.64	-28.62	0.	0.
	*W	0.	0.	0.	0.	-9.53	-21.16	-33.74	0.	0.
110	*C	0.	0.	0.	0.	22.77	31.24	39.62	-36.18	0.
	*W	0.	0.	0.	0.	23.92	32.02	40.08	-43.81	0.
	*C	0.	0.	0.	0.	-7.72	-16.62	-25.25	0.	0.
	*W	0.	0.	0.	0.	-9.24	-18.13	-26.99	0.	0.
120	*C	0.	0.	0.	11.94	25.16	33.59	42.58	-33.39	-49.07
	*W	0.	0.	0.	13.52	25.93	34.19	42.66	-35.29	0.
	*C	0.	0.	0.	3.87	-8.84	-16.83	-24.47	0.	0.
	*W	0.	0.	0.	1.11	-10.16	-17.81	-25.64	0.	0.
130	*C	0.	0.	0.	17.91	28.85	37.58	47.39	-33.04	-45.51
	*W	0.	0.	0.	18.51	29.20	37.48	46.32	-34.61	-48.97
	*C	0.	0.	0.	-0.11	-10.03	-17.45	-24.71	0.	0.
	*W	0.	0.	0.	-1.84	-11.04	-18.83	-26.63	0.	0.
140	*C	0.	0.	0.	23.69	33.74	42.71	-25.71	-34.07	-46.50
	*W	0.	0.	0.	23.62	33.44	42.64	-27.01	-34.64	-47.75
	*C	0.	0.	0.	-2.18	-11.13	-18.43	0.	0.	0.
	*W	0.	0.	0.	-3.48	-11.96	-19.72	0.	0.	0.
150	*C	0.	0.	0.	29.20	38.77	47.82	-27.57	-36.45	-49.55
	*W	0.	0.	0.	28.38	39.09	47.59	-28.01	-37.66	0.
	*C	0.	0.	0.	-4.30	-12.61	-19.97	0.	0.	0.
	*W	0.	0.	0.	-5.33	-13.66	-21.14	0.	0.	0.
160	*C	0.	0.	19.19	33.47	42.81	-22.29	-30.27	-39.83	0.
	*W	0.	0.	19.45	32.67	42.56	-23.26	-29.81	-42.65	0.
	*C	0.	0.	6.74	-6.48	-14.73	0.	0.	0.	0.
	*W	0.	0.	4.88	-7.11	-15.95	0.	0.	0.	0.
170	*C	0.	0.	22.44	35.95	45.23	-25.20	-33.69	-43.84	0.
	*W	0.	0.	22.46	35.72	44.46	-25.84	-32.65	-44.95	0.
	*C	0.	0.	3.02	-9.02	-17.34	0.	0.	0.	0.
	*W	0.	0.	2.01	-8.85	-18.56	0.	0.	0.	0.

* REFER TO FIGURE 35 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WITAKER

*Table 54. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 0 Kilometers

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
-180	*C	11.94	22.90	31.91	40.97	46.63	-40.32	-45.70	-49.60	0.	0.
	*W	11.38	22.43	31.49	40.64	46.32	-40.40	-45.91	0.	0.	0.
	*C	-6.58	-16.03	-23.53	-31.24	-36.37	0.	0.	0.	0.	0.
	*W	-6.43	-15.95	-23.55	-31.33	-36.45	0.	0.	0.	0.	0.
	*C	9.87	20.72	29.98	39.17	45.18	49.34	-47.73	0.	0.	0.
	*W	9.72	20.76	29.91	38.98	45.00	49.07	-47.90	0.	0.	0.
-170	*C	-8.26	-17.76	-25.47	-33.13	-38.34	-42.18	0.	0.	0.	0.
	*W	-7.55	-17.30	-25.15	-32.87	-38.19	-42.15	0.	0.	0.	0.
-160	*C	7.49	18.76	27.82	37.11	43.10	47.35	0.	0.	0.	0.
	*W	7.94	19.13	28.09	37.16	43.05	47.26	0.	0.	0.	0.
	*C	-9.54	-19.43	-27.06	-35.16	-40.42	-44.36	0.	0.	0.	0.
	*W	-8.36	-18.56	-26.42	-34.62	-40.12	-44.14	0.	0.	0.	0.
-150	*C	5.61	17.07	26.13	35.31	41.12	45.46	0.	0.	0.	0.
	*W	6.39	17.75	26.57	35.54	41.26	45.52	0.	0.	0.	0.
	*C	-10.14	-20.67	-28.71	-36.83	-42.26	-46.34	0.	0.	0.	0.
	*W	-8.69	-19.79	-27.85	-36.19	-41.72	-45.97	0.	0.	0.	0.
-140	*C	3.16	15.69	24.66	33.38	39.16	43.24	49.13	0.	0.	0.
	*W	5.14	16.55	25.28	33.76	39.47	43.46	49.26	0.	0.	0.
	*C	-10.17	-21.69	-30.28	-38.62	-44.29	-48.40	0.	0.	0.	0.
	*W	-8.82	-20.65	-29.31	-37.80	-43.56	-47.89	0.	0.	0.	0.
-130	*C	0.93	14.34	23.10	31.64	37.13	41.19	46.78	0.	0.	0.
	*W	3.21	15.52	23.84	32.03	37.42	41.40	46.96	0.	0.	0.
	*C	-9.58	-22.57	-31.47	-40.40	-46.17	0.	0.	0.	0.	0.
	*W	-8.34	-21.51	-30.64	-39.61	-45.54	0.	0.	0.	0.	0.
-120	*C	-2.06	13.00	21.69	30.12	35.39	39.22	44.78	48.41	0.	0.
	*W	1.21	14.21	22.34	30.45	35.61	39.47	45.02	48.62	0.	0.
	*C	-7.77	-23.29	-32.70	-42.00	-48.11	0.	0.	0.	0.	0.
	*W	-8.03	-22.50	-31.93	-41.32	-47.47	0.	0.	0.	0.	0.
-110	*C	-4.52	11.68	20.33	28.22	33.38	37.11	42.45	46.22	0.	0.
	*W	-0.68	12.54	20.82	28.58	33.61	37.28	42.62	46.37	0.	0.
	*C	-5.76	-24.11	-34.10	-43.87	0.	0.	0.	0.	0.	0.
	*W	-8.19	-23.67	-33.55	-43.29	-49.76	0.	0.	0.	0.	0.

* REFER TO FIGURE 36 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 54 (Cont.)

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
-100	*C	0.	10.12	18.39	26.33	31.44	35.32	40.60	44.34	49.41	0.
	*W	0.	10.67	18.89	26.60	31.60	35.43	40.69	44.45	49.50	0.
	*C	0.	-25.20	-35.65	-45.79	0.	0.	0.	0.	0.	0.
	*W	0.	-25.23	-35.47	-45.49	0.	0.	0.	0.	0.	0.
	*C	0.	7.27	16.13	24.35	29.62	33.33	38.83	42.55	47.68	0.
	*W	0.	7.71	16.41	24.53	29.73	33.44	38.89	42.56	47.67	0.
-90	*C	0.	-26.23	-37.20	-47.51	0.	0.	0.	0.	0.	0.
	*W	0.	-26.53	-37.28	-47.41	0.	0.	0.	0.	0.	0.
	*C	0.	3.73	13.47	22.20	27.78	31.84	37.55	41.55	46.86	0.
	*W	0.	4.08	13.56	22.17	27.71	31.78	37.49	41.47	46.76	0.
	*C	0.	-26.87	-38.51	-48.95	0.	0.	0.	0.	0.	0.
	*W	0.	-27.32	-38.90	-49.15	0.	0.	0.	0.	0.	0.
-80	*C	0.	-0.40	11.06	20.88	26.89	31.29	37.34	41.54	47.07	0.
	*W	0.	-0.48	10.84	20.59	26.59	31.04	37.13	41.35	46.88	0.
	*C	0.	-26.39	-39.00	-49.72	0.	0.	0.	0.	0.	0.
	*W	0.	-27.14	-39.76	0.	0.	0.	0.	0.	0.	0.
	*C	0.	-3.68	10.20	21.05	27.52	32.13	38.50	42.75	48.46	0.
	*W	0.	-4.93	9.41	20.42	27.02	31.75	38.24	42.58	48.34	0.
-60	*C	0.	-24.43	-38.25	-49.48	0.	0.	0.	0.	0.	0.
	*W	0.	-25.61	-39.40	0.	0.	0.	0.	0.	0.	0.
	*C	0.	-0.27	12.58	23.35	30.05	34.60	40.81	45.18	0.	0.
	*W	0.	-2.90	11.14	22.73	29.60	34.21	40.65	45.11	0.	0.
	*C	0.	-21.28	-36.18	-48.09	0.	0.	0.	0.	0.	0.
	*W	0.	-22.71	-37.59	-49.18	0.	0.	0.	0.	0.	0.
-40	*C	0.	7.24	18.30	27.28	33.16	37.48	43.56	47.62	0.	0.
	*W	0.	5.55	17.51	27.00	33.26	37.65	43.62	47.70	0.	0.
	*C	0.	-18.09	-32.73	-45.66	0.	0.	0.	0.	0.	0.
	*W	0.	-20.16	-34.62	-46.85	0.	0.	0.	0.	0.	0.
	*C	0.	13.56	23.12	31.36	36.56	40.57	46.26	0.	0.	0.
	*W	0.	14.38	23.94	31.90	37.01	41.12	46.61	0.	0.	0.
-30	*C	0.	-14.95	-28.43	-41.86	0.	0.	0.	0.	0.	0.
	*W	0.	-16.75	-30.37	-43.27	0.	0.	0.	0.	0.	0.
	*C	0.	18.24	26.90	34.79	39.66	43.12	48.65	0.	0.	0.
	*W	0.	21.02	28.89	35.88	40.47	44.07	49.23	0.	0.	0.
	*C	0.	13.56	23.12	31.36	36.56	40.57	46.26	0.	0.	0.
	*W	0.	14.38	23.94	31.90	37.01	41.12	46.61	0.	0.	0.
-20	*C	0.	-14.95	-28.43	-41.86	0.	0.	0.	0.	0.	0.
	*W	0.	-16.75	-30.37	-43.27	0.	0.	0.	0.	0.	0.
	*C	0.	18.24	26.90	34.79	39.66	43.12	48.65	0.	0.	0.
	*W	0.	21.02	28.89	35.88	40.47	44.07	49.23	0.	0.	0.
	*C	0.	13.56	23.12	31.36	36.56	40.57	46.26	0.	0.	0.
	*W	0.	14.38	23.94	31.90	37.01	41.12	46.61	0.	0.	0.

* REFER TO FIGURE 36 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 54 (Cont.)

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
	*C	0.	-11.76	-24.11	-37.27	-46.46	0.	0.	0.	0.	0.
	*W	0.	-12.72	-25.26	-38.18	-47.12	0.	0.	0.	0.	0.
-10	*C	0.	21.96	30.10	37.16	41.79	45.37	0.	0.	0.	0.
	*W	10.44	24.96	31.70	38.25	42.70	46.21	0.	0.	0.	0.
	*C	0.	-9.56	-20.49	-32.67	-41.84	-48.99	0.	0.	0.	0.
	*W	9.57	-8.54	-19.91	-32.44	-41.84	-49.01	0.	0.	0.	0.
0	*C	11.79	25.11	32.13	39.16	43.63	46.91	0.	0.	0.	0.
	*W	16.20	26.45	33.21	39.82	44.23	47.67	0.	0.	0.	0.
	*C	6.98	-7.80	-17.67	-28.85	-37.43	-44.57	0.	0.	0.	0.
	*W	6.12	-6.55	-16.40	-27.67	-36.67	-44.10	0.	0.	0.	0.
10	*C	17.09	26.85	33.70	40.46	45.00	47.95	0.	0.	0.	0.
	*W	17.84	27.29	34.01	40.21	45.12	48.74	0.	0.	0.	0.
	*C	4.36	-6.73	-15.84	-26.08	-33.99	-40.65	0.	0.	0.	0.
	*W	4.10	-6.46	-15.11	-25.06	-33.11	-40.07	0.	0.	0.	0.
20	*C	19.49	27.82	34.52	41.04	45.55	48.79	-47.65	0.	0.	0.
	*W	18.71	27.56	34.35	41.02	45.69	49.49	-47.02	0.	0.	0.
	*C	3.35	-6.57	-15.09	-24.55	-31.78	-37.86	0.	0.	0.	0.
	*W	2.81	-6.79	-14.87	-24.06	-31.45	-37.65	0.	0.	0.	0.
30	*C	20.06	27.83	34.52	41.17	45.83	49.44	-45.27	0.	0.	0.
	*W	18.94	27.38	34.36	41.30	46.11	49.93	-45.05	0.	0.	0.
	*C	1.73	-7.34	-15.34	-24.18	-30.85	-36.36	0.	0.	0.	0.
	*W	1.11	-7.59	-15.40	-24.09	-30.85	-36.45	0.	0.	0.	0.
40	*C	19.37	27.20	34.04	41.06	45.92	49.73	-43.62	-49.74	0.	0.
	*W	18.78	27.04	34.04	41.23	46.17	-35.80	-43.50	-49.19	0.	0.
	*C	-0.46	-8.83	-16.25	-24.61	-30.74	-35.73	0.	0.	0.	0.
	*W	-0.17	-8.82	-16.26	-24.60	-30.74	0.	0.	0.	0.	0.
50	*C	18.91	26.79	33.74	41.05	46.04	49.96	-42.45	-47.82	0.	0.
	*W	18.76	26.85	33.83	41.20	46.24	-35.52	-42.44	-47.56	0.	0.

* REFER TO FIGURE 36 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 54 (Cont.)

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
60	*C	-2.22	-10.34	-17.25	-25.19	-30.84	-35.44	0.	0.	0.	0.
	*W	-1.60	-10.10	-17.10	-25.17	-30.88	0.	0.	0.	0.	0.
	*C	20.12	27.35	34.22	41.38	46.32	-35.09	-41.42	-46.25	0.	0.
	*W	19.99	27.30	34.17	41.42	46.45	-35.24	-41.57	-46.26	0.	0.
	*C	-3.77	-11.14	-17.86	-25.45	-30.79	0.	0.	0.	0.	0.
	*W	-3.07	-10.82	-17.64	-25.43	-30.88	0.	0.	0.	0.	0.
70	*C	21.84	28.69	35.19	41.95	46.75	-34.44	-40.43	-44.89	0.	0.
	*W	21.16	28.11	34.84	41.87	46.80	-34.80	-40.71	-45.11	0.	0.
	*C	-4.58	-11.38	-17.94	-25.33	-30.46	0.	0.	0.	0.	0.
	*W	-4.00	-11.14	-17.85	-25.45	-30.68	0.	0.	0.	0.	0.
	*C	23.61	30.06	35.97	42.56	47.21	-33.67	-39.36	-43.35	-49.13	0.
	*W	22.62	29.27	35.59	42.42	47.21	-34.14	-39.87	-43.75	-49.41	0.
80	*C	-4.77	-11.30	-17.74	-25.04	-30.01	0.	0.	0.	0.	0.
	*W	-4.50	-11.23	-17.82	-25.26	-30.33	0.	0.	0.	0.	0.
	*C	24.61	30.64	36.48	43.01	47.60	-33.10	-38.44	-42.20	-47.47	0.
	*W	23.80	30.17	36.14	42.85	47.55	-33.56	-38.98	-42.68	-47.94	0.
	*C	-5.02	-11.36	-17.69	-24.81	-29.59	0.	0.	0.	0.	0.
	*W	-4.78	-11.27	-17.73	-25.04	-30.00	0.	0.	0.	0.	0.
90	*C	24.51	30.66	36.62	43.26	47.88	-32.90	-37.95	-41.55	-46.47	0.
	*W	24.07	30.43	36.41	43.11	47.79	-33.31	-38.45	-42.07	-47.00	0.
	*C	-5.47	-11.80	-18.05	-24.99	-29.56	0.	0.	0.	0.	0.
	*W	-5.17	-11.59	-18.00	-25.12	-29.91	0.	0.	0.	0.	0.
	*C	23.57	30.27	36.49	43.37	48.10	-33.06	-37.90	-41.35	-46.05	-49.31
	*W	23.31	30.13	36.35	43.22	47.96	-33.40	-38.33	-41.79	-46.57	-49.31
110	*C	-6.06	-12.48	-18.69	-25.36	-29.90	0.	0.	0.	0.	0.
	*W	-5.69	-12.27	-18.68	-25.51	-30.15	0.	0.	0.	0.	0.

* REFER TO FIGURE 36 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 54 (Cont.)

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
120	*C	22.40	29.71	36.30	43.48	48.35	-33.43	-38.16	-41.50	-46.08	-49.23
	*W	22.04	29.38	36.09	43.25	48.13	-33.86	-38.66	-41.98	-46.61	0.
	*C	-6.36	-12.99	-19.26	-25.77	-30.27	0.	0.	0.	0.	0.
	*W	-6.14	-13.00	-19.45	-26.02	-30.56	0.	0.	0.	0.	0.
	*C	21.46	29.22	36.23	43.67	48.65	-33.93	-38.69	-41.96	-46.50	-49.80
	*W	20.85	28.65	35.82	43.26	48.30	-34.56	-39.33	-42.52	-47.06	0.
130	*C	-6.01	-13.00	-19.52	-26.09	-30.63	0.	0.	0.	0.	0.
	*W	-6.11	-13.34	-19.96	-26.53	-31.09	0.	0.	0.	0.	0.
	*C	20.65	28.85	36.20	43.84	48.90	-34.61	-39.52	-42.76	-47.35	0.
	*W	19.64	28.04	35.58	43.28	48.46	-35.23	-40.15	-43.38	-47.96	0.
	*C	-5.08	-12.56	-19.49	-26.37	-31.05	0.	0.	0.	0.	0.
	*W	-5.56	-13.26	-20.15	-26.96	-31.63	0.	0.	0.	0.	0.
140	*C	19.35	28.23	35.96	43.79	48.95	-35.45	-40.53	-44.04	-48.75	0.
	*W	17.89	27.27	35.22	43.13	48.45	-35.95	-40.99	-44.70	-49.45	0.
	*C	-3.61	-12.18	-19.61	-26.85	-31.73	0.	0.	0.	0.	0.
	*W	-4.69	-13.09	-20.37	-27.52	-32.33	0.	0.	0.	0.	0.
	*C	17.15	27.04	35.29	43.33	48.62	-36.59	-41.82	-45.60	0.	0.
	*W	16.08	26.11	34.42	42.66	48.10	-37.02	-42.25	-46.01	0.	0.
150	*C	-3.26	-12.55	-20.31	-27.83	-32.87	0.	0.	0.	0.	0.
	*W	-4.39	-13.39	-20.93	-28.49	-33.42	0.	0.	0.	0.	0.
	*C	14.82	25.31	33.85	42.35	47.84	-38.26	-43.66	-47.32	0.	0.
	*W	13.69	24.38	33.08	41.82	47.38	-38.53	-43.99	-47.71	0.	0.
	*C	-4.84	-14.14	-21.64	-29.49	-34.62	0.	0.	0.	0.	0.
	*W	-5.68	-14.52	-21.94	-29.91	-34.96	0.	0.	0.	0.	0.

- * REFER TO FIGURE 36 (RM 63TMP-2)
 *C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND GAIN
 *W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 55. Constant Magnetic Field Intensity, B(Gauss), at
Altitude 500 Kilometers

LONG (DEG)		B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
-180	*C	0.	0.	28.58	42.00	-29.65	-40.95	0.
	*W	0.	0.	28.67	41.75	-30.15	-41.31	0.
	*C	0.	0.	-7.89	-19.42	0.	0.	0.
	*W	0.	0.	-8.29	-20.29	0.	0.	0.
	*C	0.	0.	26.89	40.74	-32.79	-44.32	0.
	*W	0.	0.	26.81	40.55	-34.04	-45.61	0.
-170	*C	0.	0.	-10.80	-22.32	0.	0.	0.
	*W	0.	0.	-11.26	-23.12	0.	0.	0.
	*C	0.	0.	24.31	38.10	-35.93	-47.75	0.
	*W	0.	0.	24.34	38.03	-38.00	0.	0.
	*C	0.	0.	-13.73	-25.33	0.	0.	0.
	*W	0.	0.	-14.26	-26.29	0.	0.	0.
-160	*C	0.	0.	21.45	34.68	46.92	0.	0.
	*W	0.	0.	21.40	35.00	47.41	0.	0.
	*C	0.	0.	-16.88	-28.46	-39.20	0.	0.
	*W	0.	0.	-17.46	-29.56	-41.73	0.	0.
	*C	0.	0.	18.80	31.08	42.74	0.	0.
	*W	0.	0.	18.40	31.25	43.19	0.	0.
-150	*C	0.	0.	-20.34	-31.83	-42.79	0.	0.
	*W	0.	0.	-20.85	-32.84	-46.07	0.	0.
	*C	0.	0.	16.39	27.74	38.57	0.	0.
	*W	0.	0.	15.78	27.61	39.07	0.	0.
	*C	0.	0.	-23.85	-35.52	-46.83	0.	0.
	*W	0.	0.	-24.20	-36.48	-49.83	0.	0.

* REFER TO FIGURE 37 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 55 (Cont.)

LONG (DEG)		B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
-120	*C	0.	0.	14.20	24.81	34.88	47.61	0.
	*W	0.	0.	13.48	24.54	35.29	48.51	0.
	*C	0.	0.	-27.69	-35.69	0.	0.	0.
	*W	0.	0.	-27.60	-40.17	0.	0.	0.
	*C	0.	-6.93	12.12	22.26	31.92	43.66	0.
	*W	0.	0.	11.66	22.03	31.97	44.36	0.
-110	*C	0.	-11.34	-32.18	-44.55	0.	0.	0.
	*W	0.	0.	-31.54	-44.33	0.	0.	0.
	*C	0.	-4.79	10.35	20.14	29.57	41.04	0.
	*W	0.	-6.09	10.14	19.93	29.46	41.49	0.
	*C	0.	-19.63	-37.56	-49.92	0.	0.	0.
	*W	0.	-17.26	-36.56	-49.28	0.	0.	0.
-100	*C	0.	-4.44	8.88	18.56	28.14	39.85	0.
	*W	0.	-4.94	8.71	18.42	28.23	40.23	0.
	*C	0.	-27.38	-43.48	0.	0.	0.	0.
	*W	0.	-25.91	-42.42	0.	0.	0.	0.
	*C	0.	-3.85	8.22	17.94	27.93	40.90	0.
	*W	0.	-4.44	7.93	17.85	28.20	41.26	0.
-80	*C	0.	-35.28	-48.92	0.	0.	0.	0.
	*W	0.	-34.29	-48.22	0.	0.	0.	0.
	*C	0.	-2.64	8.80	18.77	29.51	44.91	0.
	*W	0.	-3.26	8.52	18.78	29.80	45.34	0.
	*C	0.	-41.38	0.	0.	0.	0.	0.
	*W	0.	-41.02	0.	0.	0.	0.	0.

* REFER TO FIGURE 37 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 55 (Cont.)

LONG (DEG)		B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
-60	*C	0.	-0.47	10.90	21.45	33.45	0.	0.
	*W	0.	-1.40	10.58	21.42	33.60	0.	0.
	*C	0.	-45.71	0.	C.	0.	0.	0.
	*W	0.	-45.27	C.	C.	0.	0.	0.
	*C	-20.24	2.47	14.43	25.77	39.21	C.	0.
	*W	-20.24	1.19	13.68	25.23	38.98	0.	0.
-50	*C	-26.04	-48.39	C.	C.	0.	0.	0.
	*W	0.	-47.14	C.	C.	0.	0.	0.
	*C	0.	6.00	18.66	30.68	45.50	0.	0.
	*W	0.	4.10	17.56	30.14	44.71	C.	0.
	*C	0.	-49.98	C.	C.	0.	0.	0.
	*W	0.	-47.76	C.	C.	0.	0.	0.
-40	*C	0.	9.13	22.42	34.90	0.	0.	0.
	*W	0.	7.29	22.16	34.19	0.	0.	0.
	*C	0.	0.	0.	C.	0.	0.	0.
	*W	C.	-47.43	C.	C.	0.	0.	0.
	*C	0.	11.06	24.99	37.92	0.	0.	0.
	*W	C.	10.37	25.07	36.88	C.	0.	0.
-30	*C	0.	-49.92	C.	C.	0.	C.	0.
	*W	0.	-46.14	C.	C.	0.	0.	0.
	*C	0.	11.44	26.30	39.54	0.	0.	C.
	*W	0.	11.10	26.40	39.29	0.	0.	0.
	*C	C.	-48.14	C.	C.	0.	C.	0.
	*W	0.	-43.54	C.	C.	0.	C.	0.
-20	*C	0.	11.44	26.30	39.54	0.	0.	C.
	*W	0.	11.10	26.40	39.29	0.	0.	0.
	*C	C.	-48.14	C.	C.	0.	C.	0.
	*W	0.	-43.54	C.	C.	0.	C.	0.
	*C	0.	11.44	26.30	39.54	0.	0.	C.
	*W	0.	11.10	26.40	39.29	0.	0.	0.
-10	*C	0.	11.44	26.30	39.54	0.	0.	C.
	*W	0.	11.10	26.40	39.29	0.	0.	0.
	*C	C.	-48.14	C.	C.	0.	C.	0.
	*W	0.	-43.54	C.	C.	0.	C.	0.
	*C	0.	11.44	26.30	39.54	0.	0.	C.
	*W	0.	11.10	26.40	39.29	0.	0.	0.

* REFER TO FIGURE 37 (RM 63 IMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 55 (Cont.)

LONG (DEG)		B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
0	*C	0.	10.26	26.58	40.01	0.	0.	0.
	*W	0.	9.11	26.55	40.62	0.	0.	0.
	*C	0.	-45.17	0.	0.	0.	0.	0.
	*W	0.	-37.52	0.	0.	0.	0.	0.
10	*C	0.	5.37	25.98	39.46	0.	0.	0.
	*W	0.	0.	25.74	40.15	0.	0.	0.
	*C	0.	-7.34	0.	0.	0.	0.	0.
	*W	0.	0.	0.	0.	0.	0.	0.
20	*C	0.	0.	24.50	37.91	0.	0.	0.
	*W	0.	0.	24.85	38.91	0.	0.	0.
30	*C	0.	0.	22.10	35.39	0.	0.	0.
	*W	0.	0.	22.86	36.91	0.	0.	0.
	*C	0.	0.	0.	0.	0.	0.	0.
	*W	0.	0.	-46.62	0.	0.	0.	0.
40	*C	0.	0.	19.21	32.34	47.64	0.	0.
	*W	0.	0.	20.44	34.12	0.	0.	0.
	*C	0.	0.	-47.60	0.	0.	0.	0.
	*W	0.	0.	-40.90	0.	0.	0.	0.
50	*C	0.	0.	16.10	29.23	42.98	0.	0.
	*W	0.	0.	17.84	31.22	46.37	0.	0.
	*C	0.	0.	-33.93	0.	0.	0.	0.
	*W	0.	0.	-30.93	0.	0.	0.	0.

* REFER TO FIGURE 37 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 55 (Cont.)

LONG (DEG)		B=0.20 LAT (DEG)	B=0.25 LAT (DEG)	B=0.30 LAT (DEG)	B=0.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
60	*C	0.	0.	12.71	26.65	39.09	0.	0.
	*W	0.	0.	15.18	28.51	42.01	0.	0.
	*C	0.	0.	-13.87	-47.61	0.	0.	0.
	*W	0.	0.	-16.43	-45.33	0.	0.	0.
	*C	0.	0.	7.01	24.76	36.39	0.	0.
	*W	0.	0.	11.68	26.50	39.01	0.	0.
70	*C	0.	0.	-0.49	-28.87	0.	0.	0.
	*W	0.	0.	-5.74	-33.09	0.	0.	0.
	*C	0.	0.	0.	23.40	34.61	49.00	0.
	*W	0.	0.	0.	24.87	37.07	0.	0.
	*C	0.	0.	0.	-15.69	-38.50	0.	0.
	*W	0.	0.	0.	-20.86	-43.18	0.	0.
80	*C	0.	0.	0.	22.61	33.71	46.63	0.
	*W	0.	0.	0.	23.79	35.48	48.49	0.
	*C	0.	0.	0.	-9.83	-25.29	-49.29	0.
	*W	0.	0.	0.	-13.06	-30.47	0.	0.
	*C	0.	0.	0.	22.51	33.58	45.96	0.
	*W	0.	0.	0.	23.69	34.65	46.98	0.
90	*C	0.	0.	0.	-7.56	-20.37	-35.32	0.
	*W	0.	0.	0.	-9.66	-23.54	-41.92	0.
	*C	0.	0.	0.	23.35	34.45	47.12	0.
	*W	0.	0.	0.	24.34	35.07	47.41	0.
	*C	0.	0.	0.	-7.42	-18.75	-30.45	0.
	*W	0.	0.	0.	-8.91	-20.43	-33.12	0.
100	*C	0.	0.	0.	23.35	34.45	47.12	0.
	*W	0.	0.	0.	24.34	35.07	47.41	0.
	*C	0.	0.	0.	-7.42	-18.75	-30.45	0.
	*W	0.	0.	0.	-8.91	-20.43	-33.12	0.
	*C	0.	0.	0.	23.35	34.45	47.12	0.
	*W	0.	0.	0.	24.34	35.07	47.41	0.
110	*C	0.	0.	0.	23.35	34.45	47.12	0.
	*W	0.	0.	0.	24.34	35.07	47.41	0.
	*C	0.	0.	0.	-7.42	-18.75	-30.45	0.
	*W	0.	0.	0.	-8.91	-20.43	-33.12	0.
	*C	0.	0.	0.	23.35	34.45	47.12	0.
	*W	0.	0.	0.	24.34	35.07	47.41	0.

* REFER TO FIGURE 37 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 55 (Cont.)

LONG (DEG)		B=C.20 LAT (DEG)	A=0.25 LAT (DEG)	B=C.30 LAT (DEG)	B=C.35 LAT (DEG)	B=0.40 LAT (DEG)	B=0.45 LAT (DEG)	B=0.50 LAT (DEG)
120	*C	0.	0.	0.	25.41	36.61	49.87	-43.76
	*W	0.	0.	0.	25.99	36.88	49.28	0.
	*C	0.	0.	0.	-8.18	-18.56	-28.90	0.
	*W	0.	0.	0.	-9.52	-19.79	-30.59	0.
	*C	0.	0.	0.	28.53	39.99	-28.83	-42.00
	*W	0.	0.	10.89	28.72	39.76	-30.41	-44.39
130	*C	0.	0.	0.	-9.25	-19.03	0.	0.
	*W	0.	0.	6.30	-10.46	-20.38	0.	0.
	*C	0.	0.	17.28	32.56	44.23	-29.71	-42.69
	*W	0.	0.	17.80	32.30	43.75	-30.86	-44.07
	*C	0.	0.	3.43	-10.47	-19.99	0.	0.
	*W	0.	0.	1.50	-11.49	-21.20	0.	0.
140	*C	0.	0.	22.85	36.63	48.33	-31.61	-44.87
	*W	0.	0.	22.59	36.28	47.55	-32.31	-46.31
	*C	0.	0.	0.00	-11.99	-21.57	0.	0.
	*W	0.	0.	-1.11	-13.02	-22.54	0.	0.
	*C	0.	0.	26.68	39.88	-23.81	-34.27	-48.38
	*W	0.	0.	26.25	39.41	-24.52	-34.57	-48.23
150	*C	0.	0.	-2.44	-14.07	0.	0.	0.
	*W	0.	0.	-3.33	-15.07	0.	0.	0.
	*C	0.	0.	28.60	41.72	-26.61	-37.55	0.
	*W	0.	0.	28.45	41.23	-27.05	-37.58	-49.82
	*C	0.	0.	-5.25	-16.61	0.	0.	0.
	*W	0.	0.	-5.65	-17.39	0.	0.	0.

* REFER TO FIGURE 37 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 56. Constant Magnetic Shell Parameter, L (Earth Radii), at
Altitude 500 Kilometers

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
-180	*C	C.	15.54	27.33	37.63	44.00	48.39	-43.95	-47.93	0.	0.
	*W	C.	15.15	26.90	37.24	43.62	48.02	-44.14	-48.17	0.	0.
	*C	C.	-8.52	-19.13	-28.13	-33.92	-38.02	0.	0.	0.	0.
	*W	C.	-8.49	-19.12	-28.20	-34.01	-38.13	0.	0.	0.	0.
	*C	C.	13.09	25.36	35.84	42.25	46.82	-46.02	0.	0.	0.
	*W	C.	13.02	25.30	35.71	42.06	46.61	-46.08	0.	0.	0.
-170	*C	C.	-10.37	-20.90	-30.16	-35.86	-40.18	0.	0.	0.	0.
	*W	C.	-9.97	-20.60	-29.94	-35.72	-40.11	0.	0.	0.	0.
-160	*C	C.	11.09	23.26	33.87	40.47	45.15	-48.15	0.	0.	0.
	*W	C.	11.36	23.51	33.97	40.46	45.10	-48.08	0.	0.	0.
	*C	C.	-11.54	-22.52	-31.85	-37.75	-42.04	0.	0.	0.	0.
	*W	C.	-10.85	-21.91	-31.40	-37.39	-41.81	0.	0.	0.	0.
-150	*C	C.	9.22	21.48	31.89	38.39	42.97	49.39	0.	0.	0.
	*W	C.	10.05	21.95	32.17	38.57	43.07	49.41	0.	0.	0.
	*C	C.	-12.51	-24.15	-33.69	-39.85	-44.18	0.	0.	0.	0.
	*W	C.	-11.59	-23.28	-33.02	-39.26	-43.74	0.	0.	0.	0.
-140	*C	C.	7.20	19.98	30.21	36.40	40.95	47.10	0.	0.	0.
	*W	C.	8.32	20.58	30.57	36.67	41.14	47.22	0.	0.	0.
	*C	C.	-13.32	-25.55	-35.48	-41.60	-46.16	0.	0.	0.	0.
	*W	C.	-12.74	-24.69	-34.79	-41.04	-45.72	0.	0.	0.	0.
-130	*C	C.	5.58	18.29	28.34	34.60	38.91	45.11	49.18	0.	0.
	*W	C.	6.85	19.15	28.84	34.97	39.20	45.28	49.37	0.	0.
	*C	C.	-13.90	-26.72	-37.02	-43.51	-48.17	0.	0.	0.	0.
	*W	C.	-12.88	-25.89	-36.33	-42.86	-47.65	0.	0.	0.	0.
-120	*C	C.	3.74	16.77	26.61	32.56	36.83	42.75	46.82	0.	0.
	*W	C.	5.43	17.52	27.05	32.89	37.08	42.97	47.00	0.	0.
	*C	C.	-14.27	-27.88	-38.71	-45.48	0.	0.	0.	0.	0.
	*W	C.	-13.66	-27.15	-38.04	-44.96	-49.87	0.	0.	0.	0.

* REFER TO FIGURE 38 (RM 63 IMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 56 (Cont.)

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
-110	*C	0.	1.80	15.30	25.03	30.76	35.05	40.77	44.92	0.	0.
	*W	0.	3.22	15.87	25.38	31.02	35.24	40.93	45.08	0.	0.
	*C	0.	-14.59	-29.16	-40.48	-47.28	0.	0.	0.	0.	0.
	*W	0.	-14.57	-28.66	-40.04	-46.83	0.	0.	0.	0.	0.
	*C	0.	-0.43	13.25	22.93	28.81	32.92	38.79	42.73	48.13	0.
	*W	0.	0.56	13.80	23.27	29.06	33.10	38.94	42.86	48.26	0.
-100	*C	0.	-14.84	-30.53	-42.11	-49.24	0.	0.	0.	0.	0.
	*W	0.	-15.15	-30.39	-41.84	-48.89	0.	0.	0.	0.	0.
	*C	0.	-4.72	10.92	20.92	26.84	31.15	37.04	41.18	46.62	0.
	*W	0.	-4.06	11.22	21.10	26.96	31.23	37.10	41.22	46.65	0.
	*C	0.	-13.74	-31.77	-43.77	0.	0.	0.	0.	0.	0.
	*W	0.	-14.88	-31.87	-43.71	0.	0.	0.	0.	0.	0.
-80	*C	0.	0.	8.08	18.90	25.31	29.84	35.95	40.30	45.88	49.76
	*W	0.	0.	8.20	18.90	25.27	29.77	35.89	40.26	45.84	49.74
	*C	0.	0.	-32.71	-45.09	0.	0.	0.	0.	0.	0.
	*W	0.	0.	-33.05	-45.25	0.	0.	0.	0.	0.	0.
	*C	0.	0.	5.58	17.41	24.37	29.15	35.71	40.25	46.01	0.
	*W	0.	0.	5.38	17.11	24.05	28.86	35.55	40.12	45.91	49.99
-70	*C	0.	0.	-32.82	-45.54	0.	0.	0.	0.	0.	0.
	*W	0.	0.	-33.46	-45.95	0.	0.	0.	0.	0.	0.
	*C	0.	0.	4.44	17.45	24.94	29.99	36.61	41.21	47.13	0.
	*W	0.	0.	3.61	16.84	24.38	29.54	36.38	41.06	47.05	0.
	*C	0.	0.	-31.81	-45.22	0.	0.	0.	0.	0.	0.
	*W	0.	0.	-32.73	-45.86	0.	0.	0.	0.	0.	0.
-60	*C	0.	0.	6.64	19.79	26.92	31.94	38.78	43.27	49.32	0.
	*W	0.	0.	5.53	19.02	26.51	31.65	38.61	43.20	49.34	0.
	*C	0.	0.	-29.65	-43.74	0.	0.	0.	0.	0.	0.
	*W	0.	0.	-30.89	-44.79	0.	0.	0.	0.	0.	0.
	*C	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	*W	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

* REFER TO FIGURE 38 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 56 (Cont.)

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
-40	*C	C.	C.	11.81	23.54	30.31	35.10	41.44	45.89	0.	0.
	*W	C.	C.	11.01	23.19	30.29	35.19	41.56	46.01	0.	0.
	*C	C.	C.	-26.19	-41.18	-49.71	0.	C.	0.	0.	0.
	*W	C.	C.	-27.77	-42.29	C.	0.	C.	C.	0.	0.
	*C	C.	C.	16.93	27.51	33.67	38.01	44.29	48.43	0.	0.
	*W	C.	C.	17.52	28.15	34.22	38.54	44.73	48.79	0.	0.
-30	*C	C.	C.	-22.25	-37.54	-46.68	0.	0.	C.	0.	0.
	*W	C.	C.	-23.87	-38.73	-47.39	0.	C.	0.	0.	0.
	*C	C.	C.	21.19	31.00	36.67	40.84	46.64	0.	0.	0.
	*W	C.	C.	22.99	32.11	37.52	41.52	47.20	0.	0.	0.
	*C	C.	C.	-18.53	-33.33	-42.89	-49.85	0.	C.	0.	0.
	*W	C.	C.	-19.30	-34.03	-43.37	0.	C.	0.	0.	0.
-20	*C	C.	C.	6.95	24.71	33.74	39.22	43.07	48.77	0.	0.
	*W	C.	C.	13.11	26.46	35.04	40.13	43.90	49.50	0.	0.
	*C	C.	C.	4.18	-15.51	-29.27	-38.70	-45.87	0.	C.	0.
	*W	C.	C.	3.31	-14.87	-28.89	-38.52	-45.74	0.	0.	0.
	*C	C.	C.	14.69	27.11	35.83	41.04	45.01	C.	0.	0.
	*W	C.	C.	16.82	28.35	36.51	41.59	45.54	C.	0.	0.
0	*C	C.	C.	2.27	-13.11	-25.84	-34.82	-41.81	C.	0.	0.
	*W	C.	C.	2.67	-11.99	-24.82	-33.98	-41.24	C.	0.	0.
	*C	C.	C.	17.81	28.97	37.15	42.29	46.13	-48.56	0.	0.
	*W	C.	C.	18.69	29.49	37.20	42.41	46.54	-47.79	C.	0.
	*C	C.	C.	1.74	-11.61	-23.35	-31.68	-38.36	0.	0.	0.
	*W	C.	C.	1.70	-11.03	-22.44	-30.86	-37.65	C.	0.	0.
10	*C	C.	C.	20.04	30.05	37.95	43.10	46.91	-45.54	0.	0.
	*W	C.	C.	19.78	30.02	38.05	43.36	47.28	-45.01	0.	0.
	*C	C.	C.	0.83	-11.09	-22.00	-29.78	-35.93	C.	C.	0.
	*W	C.	C.	0.42	-10.99	-21.60	-29.33	-35.57	C.	C.	0.

* REFER TO FIGURE 38 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 56 (Cont.)

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
30	*C	C.	20.48	30.20	38.23	43.52	47.40	-43.27	-49.91	0.	0.
	*W	0.	20.07	30.07	38.35	43.79	47.75	-42.93	-49.17	0.	0.
	*C	C.	-0.51	-11.47	-21.67	-28.86	-34.56	C.	0.	0.	0.
	*W	C.	-0.74	-11.51	-21.59	-28.73	-34.45	C.	C.	0.	0.
40	*C	C.	20.34	30.00	38.25	43.72	47.70	-41.78	-47.67	0.	0.
	*W	0.	20.10	29.96	38.39	43.97	48.01	-41.60	-47.23	0.	0.
	*C	0.	-2.03	-12.41	-22.03	-28.68	-33.88	C.	0.	0.	0.
	*W	0.	-1.90	-12.37	-21.98	-28.63	-33.83	C.	0.	0.	0.
50	*C	C.	20.38	29.94	38.35	43.95	47.98	-40.75	-46.06	0.	0.
	*W	C.	20.28	30.00	38.48	44.16	48.24	-40.69	-45.85	0.	0.
	*C	0.	-3.83	-13.47	-22.51	-28.73	-33.50	C.	0.	0.	0.
	*W	0.	-3.30	-13.26	-22.43	-28.71	-33.50	C.	0.	0.	0.
60	*C	C.	21.25	30.44	38.81	44.36	48.34	-39.85	-44.70	0.	0.
	*W	C.	21.01	30.36	38.81	44.47	48.52	-39.96	-44.70	0.	0.
	*C	C.	-5.22	-14.18	-22.75	-28.62	-33.06	C.	C.	0.	0.
	*W	C.	-4.69	-13.89	-22.68	-28.66	-33.16	0.	0.	0.	0.
70	*C	C.	22.85	31.35	39.53	44.92	48.78	-38.75	-43.21	-49.61	0.
	*W	C.	22.19	30.99	39.37	44.93	48.88	-39.02	-43.42	-49.67	0.
	*C	0.	-5.73	-14.33	-22.61	-28.25	-32.47	C.	0.	0.	0.
	*W	C.	-5.39	-14.21	-22.68	-28.44	-32.71	0.	C.	0.	0.
80	*C	0.	24.47	32.27	40.21	45.38	49.25	-37.74	-41.95	-47.76	0.
	*W	C.	23.58	31.80	40.03	45.32	49.27	-38.13	-42.30	-48.05	0.
	*C	C.	-5.90	-14.22	-22.32	-27.76	-31.84	0.	0.	0.	0.
	*W	0.	-5.70	-14.23	-22.48	-28.05	-32.17	0.	0.	0.	0.
90	*C	12.14	25.32	32.88	40.63	45.75	49.68	-36.97	-41.02	-46.42	0.
	*W	0.	24.70	32.45	40.44	45.65	49.62	-37.41	-41.44	-46.85	0.
	*C	7.34	-6.07	-14.23	-22.13	-27.41	-31.37	0.	C.	0.	0.
	*W	0.	-5.90	-14.22	-22.30	-27.71	-31.72	0.	0.	0.	0.
100	*C	12.64	25.38	33.04	40.85	46.00	-31.19	-36.57	-40.49	-45.63	-49.07
	*W	10.83	25.04	32.75	40.67	45.87	49.89	-36.99	-40.91	-46.09	-49.77

* REFER TO FIGURE 38 (RM 63 TMP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 56 (Cont.)

LONG (DEG)		L=1.00 LAT (DEG)	L=1.10 LAT (DEG)	L=1.25 LAT (DEG)	L=1.50 LAT (DEG)	L=1.75 LAT (DEG)	L=2.00 LAT (DEG)	L=2.50 LAT (DEG)	L=3.00 LAT (DEG)	L=4.00 LAT (DEG)	L=5.00 LAT (DEG)
	*C	5.95	-6.47	-14.57	-22.23	-27.35	0.	0.	0.	0.	0.
	*W	8.63	-6.22	-14.50	-22.37	-27.62	-31.51	0.	0.	0.	0.
110	*C	11.12	24.97	32.87	40.93	46.18	-31.28	-36.50	-40.32	-45.29	-48.41
	*W	0.	24.60	32.63	40.75	46.01	-31.60	-36.91	-40.73	-45.75	-49.13
	*C	6.82	-6.95	-15.09	-22.57	-27.57	0.	0.	0.	0.	0.
	*W	0.	-6.69	-15.07	-22.73	-27.84	0.	0.	0.	0.	0.
120	*C	0.	24.11	32.59	40.97	46.35	-31.56	-36.70	-40.44	-45.32	-48.35
	*W	0.	23.65	32.29	40.72	46.10	-31.94	-37.16	-40.88	-45.79	-49.06
	*C	0.	-7.20	-15.42	-22.96	-27.91	0.	0.	0.	0.	0.
	*W	0.	-7.10	-15.54	-23.24	-28.29	0.	0.	0.	0.	0.
130	*C	0.	23.33	32.37	41.02	46.51	-31.94	-37.12	-40.82	-45.68	-48.84
	*W	0.	27.66	31.88	40.64	46.16	-32.46	-37.67	-41.32	-46.18	-49.58
	*C	0.	-6.96	-15.51	-23.26	-28.29	0.	0.	0.	0.	0.
	*W	0.	-7.15	-15.84	-23.74	-28.83	0.	0.	0.	0.	0.
140	*C	0.	22.58	32.14	41.03	46.60	-32.49	-37.81	-41.50	-46.40	-49.93
	*W	0.	21.70	31.48	40.52	46.16	-33.10	-38.43	-42.04	-46.94	0.
	*C	0.	-6.32	-15.41	-23.53	-28.77	0.	0.	0.	0.	0.
	*W	0.	-6.82	-15.96	-24.19	-29.44	0.	0.	0.	0.	0.
150	*C	0.	21.59	31.70	40.85	46.51	-33.35	-38.90	-42.59	-47.61	0.
	*W	0.	20.63	30.94	40.27	46.02	-33.99	-39.52	-43.15	-48.18	0.
	*C	0.	-5.70	-15.43	-24.03	-29.54	0.	0.	0.	0.	0.
	*W	0.	-6.40	-16.11	-24.79	-30.18	0.	0.	0.	0.	0.
160	*C	0.	20.18	30.84	40.33	46.11	-34.71	-40.35	-44.21	-49.44	0.
	*W	0.	19.03	30.11	39.68	45.63	-35.99	-41.72	-45.73	-50.99	0.
	*C	0.	-5.73	-15.97	-25.06	-30.60	0.	0.	0.	0.	0.
	*W	0.	-6.45	-16.60	-25.57	-31.06	-35.19	0.	0.	0.	0.
170	*C	0.	17.79	29.39	39.24	45.35	-36.68	-41.91	-45.96	0.	0.
	*W	0.	16.95	28.58	38.62	44.93	-37.18	-42.20	-46.24	0.	0.
	*C	0.	-6.76	-17.27	-26.36	-32.02	-36.18	0.	0.	0.	0.
	*W	0.	-7.31	-17.62	-26.68	-32.33	-36.45	0.	0.	0.	0.

* REFER TO FIGURE 38 (RM 63 TWP-2)

*C COMPUTED WITH 48 COEFFICIENTS OF JENSEN AND CAIN

*W COMPUTED WITH 512 COEFFICIENTS OF JENSEN AND WHITAKER

*Table 57. Points with $B=0.3291$ Gauss, $L=1.077$ Earth Radii, and $I=0.216$ Earth Radii

LONGITUDE DEGREES EAST	NORTHERN		SOUTHERN	
	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-170	17.50	100	-11.45	316
-160	15.45	107	-13.32	287
-150	13.67	113	-15.08	248
-140	12.02	118	-16.78	202
-130	10.46	124	-18.39	148
-120	8.97	133	-19.91	90
-110	7.42	142	-21.54	28
-100	5.58	141	-23.65	-46
-90	3.23	112	-26.43	-147
-80	0.54	44	-29.67	-293
-70	-2.00	-63	-32.86	-487
-60	-3.25	-171	-35.33	-718
-50	0.21	-155	-36.05	-937
-40	6.53	-74	-30.50	-860
-30	11.79	-22	-21.89	-572
-20	15.70	29	-15.60	-388
-10	18.62	88	-11.14	-252
0	20.78	150	-7.83	-133
10	22.15	208	-5.53	-35
20	22.56	259	-4.61	33
30	22.02	306	-5.07	70
40	20.89	350	-6.32	94
50	19.95	399	-7.27	142
60	19.96	461	-7.09	238
70	20.72	526	-6.01	356
80	21.56	578	-4.82	457
90	22.04	609	-4.13	523
100	22.07	612	-4.11	555
110	21.85	588	-4.51	561
120	21.69	540	-4.91	546
130	21.90	470	-5.01	515
140	22.44	383	-4.86	471
150	22.93	286	-4.86	420
160	22.83	194	-5.58	378
170	21.75	128	-7.23	352
180	19.77	101	-9.37	336

* REFER TO FIGURES 39, 41, 45, 46, AND 49 (RM 63TMP-2)

*Table 58. Points with B=0.3148 Gauss, L=1.093 Earth Radii, and I=0.218 Earth Radii

LONGITUDE DEGREES EAST	NORTHERN		SOUTHERN	
	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-170	17.50	200	-11.37	409
-160	15.45	206	-13.26	380
-150	13.65	211	-15.03	342
-140	11.98	216	-16.75	296
-130	10.39	221	-18.35	243
-120	8.88	229	-19.92	186
-110	7.31	236	-21.58	124
-100	5.45	232	-23.70	50
-90	3.13	202	-26.43	-50
-80	0.51	133	-29.56	-192
-70	-1.92	29	-32.56	-378
-60	-2.98	-73	-34.75	-592
-50	0.27	-64	-35.03	-784
-40	6.34	11	-30.01	-729
-30	11.55	64	-22.03	-481
-20	15.48	116	-15.82	-304
-10	18.42	175	-11.35	-169
0	20.59	236	-8.03	-51
10	21.97	294	-5.73	47
20	22.39	346	-4.79	115
30	21.89	393	-5.21	154
40	20.83	438	-6.37	181
50	19.95	488	-7.24	233
60	19.98	550	-7.04	330
70	20.71	616	-5.99	448
80	21.53	668	-4.83	548
90	22.01	699	-4.14	614
100	22.06	703	-4.09	648
110	21.86	681	-4.46	654
120	21.73	633	-4.83	641
130	21.93	565	-4.93	610
140	22.43	480	-4.81	566
150	22.87	385	-4.84	515
160	22.74	296	-5.57	473
170	21.67	231	-7.19	447
180	19.73	203	-9.30	429

* REFER TO FIGURES 39, 41, 45, 46, AND 49 (RM 63TMP-2)

*Table 59. Points with $B=0.3014$ Gauss, $L=1.108$ Earth Radii, and $I=0.220$ Earth Radii

LONGITUDE DEGREES EAST	NORTHERN		SOUTHERN	
	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-170	17.50	300	-11.30	502
-160	15.45	305	-13.20	473
-150	13.63	310	-14.99	436
-140	11.94	314	-16.71	391
-130	10.33	318	-18.36	339
-120	8.80	325	-19.93	282
-110	7.20	330	-21.62	220
-100	5.33	324	-23.74	146
-90	3.04	292	-26.43	47
-80	0.48	223	-29.46	-92
-70	-1.84	121	-32.29	-270
-60	-2.74	23	-34.24	-471
-50	0.34	27	-34.22	-641
-40	6.17	97	-29.61	-604
-30	11.32	150	-22.15	-390
-20	15.26	202	-16.03	-219
-10	18.22	262	-11.55	-85
0	20.40	323	-8.22	32
10	21.78	381	-5.92	129
20	22.23	433	-4.97	197
30	21.76	480	-5.34	238
40	20.77	526	-6.42	269
50	19.95	577	-7.22	324
60	20.00	640	-7.00	423
70	20.71	706	-5.97	539
80	21.51	759	-4.83	639
90	21.98	790	-4.15	706
100	22.05	795	-4.08	740
110	21.87	773	-4.41	748
120	21.76	727	-4.76	735
130	21.95	660	-4.86	705
140	22.42	577	-4.76	661
150	22.82	484	-4.82	611
160	22.66	397	-5.56	568
170	21.59	334	-7.15	541
180	19.70	304	-9.24	523

* REFER TO FIGURES 39, 41, 45, 46, AND 49 (RM 63TMP-2)

*Table 60. Points with B=0.2887 Gauss, L=1.124 Earth Radii, and I=0.222 Earth Radii

LONGITUDE DEGREES EAST	NORTHERN		SOUTHERN	
	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-170	17.50	400	-11.24	596
-160	15.45	403	-13.14	567
-150	13.62	408	-14.95	530
-140	11.90	412	-16.68	485
-130	10.28	416	-18.34	434
-120	8.72	421	-19.94	378
-110	7.10	424	-21.66	316
-100	5.23	416	-23.79	242
-90	2.95	382	-26.43	144
-80	0.45	314	-29.36	9
-70	-1.76	214	-32.05	-162
-60	-2.54	120	-33.79	-352
-50	0.40	119	-33.57	-508
-40	6.01	183	-29.28	-485
-30	11.10	237	-22.26	-297
-20	15.05	289	-16.24	-133
-10	18.02	349	-11.76	-1
0	20.22	410	-8.41	115
10	21.61	468	-6.11	211
20	22.07	520	-5.14	280
30	21.65	568	-5.46	323
40	20.71	614	-6.47	357
50	19.96	666	-7.20	416
60	20.01	730	-6.96	515
70	20.71	796	-5.95	631
80	21.49	849	-4.84	731
90	21.96	881	-4.16	798
100	22.04	886	-4.07	833
110	21.89	866	-4.36	842
120	21.80	821	-4.69	829
130	21.98	755	-4.79	800
140	22.42	674	-4.71	756
150	22.77	584	-4.80	707
160	22.58	498	-5.55	664
170	21.52	436	-7.12	636
180	19.67	406	-9.17	617

* REFER TO FIGURES 39, 41, 45, 46, AND 49 (RM 63TMP-2)

*Table 61. Points with $B=0.2653$ Gauss, $L=1.155$ Earth Radii, and $I=0.226$ Earth Radii

LONGITUDE DEGREES EAST	NORTHERN		SOUTHERN	
	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-170	17.50	600	-11.13	784
-160	15.46	601	-13.05	755
-150	13.59	605	-14.87	719
-140	11.84	607	-16.63	675
-130	10.18	610	-18.33	625
-120	8.57	613	-19.97	570
-110	6.92	613	-21.74	509
-100	5.03	601	-23.87	435
-90	2.80	565	-26.43	338
-80	0.42	496	-29.18	209
-70	-1.61	400	-31.61	49
-60	-2.18	311	-33.05	-122
-50	0.54	303	-32.56	-257
-40	5.74	358	-28.75	-254
-30	10.70	411	-22.45	-109
-20	14.64	464	-16.63	41
-10	17.65	524	-12.15	169
0	19.87	584	-8.80	282
10	21.27	642	-6.50	377
20	21.76	695	-5.49	447
30	21.42	744	-5.71	494
40	20.61	792	-6.57	535
50	19.96	846	-7.17	600
60	20.05	911	-6.89	701
70	20.72	977	-5.92	816
80	21.46	1031	-4.86	914
90	21.93	1063	-4.18	983
100	22.04	1070	-4.05	1020
110	21.94	1051	-4.28	1030
120	21.87	1009	-4.56	1018
130	22.04	946	-4.66	990
140	22.42	868	-4.62	947
150	22.69	782	-4.77	899
160	22.45	700	-5.53	856
170	21.40	640	-7.06	826
180	19.61	609	-9.07	805

* REFER TO FIGURES 39, 41, 45, 46, AND 49 (RM 63TMP-2)

*Table 62. Points with B=0.2443 Gauss, L=1.186 Earth Radii, and I=0.231 Earth Radii

LONGITUDE DEGREES EAST	NORTHERN		SOUTHERN	
	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-170	17.50	800	-11.02	972
-160	15.46	800	-12.96	944
-150	13.57	802	-14.81	909
-140	11.79	803	-16.60	866
-130	10.09	805	-18.32	817
-120	8.45	805	-20.01	762
-110	6.76	802	-21.82	701
-100	4.86	787	-23.95	628
-90	2.67	748	-26.43	532
-80	0.39	679	-29.03	408
-70	-1.46	586	-31.24	258
-60	-1.88	502	-32.44	101
-50	0.65	489	-31.81	-21
-40	5.51	535	-28.33	-31
-30	10.34	587	-22.59	81
-20	14.27	641	-16.99	218
-10	17.30	700	-12.53	341
0	19.54	760	-9.17	452
10	20.95	818	-6.87	546
20	21.48	871	-5.83	617
30	21.22	921	-5.95	668
40	20.52	971	-6.66	715
50	19.98	1026	-7.14	785
60	20.09	1092	-6.84	887
70	20.73	1159	-5.90	1001
80	21.45	1214	-4.87	1099
90	21.91	1247	-4.20	1168
100	22.04	1255	-4.03	1206
110	21.98	1238	-4.22	1218
120	21.94	1197	-4.45	1208
130	22.10	1137	-4.55	1181
140	22.42	1062	-4.55	1139
150	22.63	980	-4.74	1091
160	22.34	902	-5.52	1049
170	21.30	843	-7.02	1018
180	19.57	811	-8.98	995

* REFER TO FIGURES 39, 41, 45, 46, AND 49 (RM 63TMP-2)

*Table 63. Points with B=0.2254 Gauss, L=1.218 Earth Radii, and I=0.235 Earth Radii

LONGITUDE DEGREES EAST	NORTHERN		SOUTHERN	
	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-170	17.50	1000	-10.93	1162
-160	15.47	998	-12.89	1134
-150	13.56	999	-14.76	1099
-140	11.75	999	-16.57	1057
-130	10.02	999	-18.32	1009
-120	8.34	998	-20.05	955
-110	6.61	992	-21.89	894
-100	4.71	974	-24.02	821
-90	2.57	933	-26.43	727
-80	0.38	864	-28.89	607
-70	-1.33	774	-30.91	465
-60	-1.62	693	-31.93	319
-50	0.76	675	-31.21	206
-40	5.32	714	-27.99	186
-30	10.01	765	-22.70	274
-20	13.92	818	-17.31	397
-10	16.96	877	-12.89	516
0	19.21	937	-9.54	624
10	20.64	994	-7.23	716
20	21.22	1048	-6.15	788
30	21.03	1099	-6.18	843
40	20.44	1151	-6.76	896
50	19.99	1208	-7.13	970
60	20.13	1275	-6.79	1074
70	20.75	1342	-5.88	1187
80	21.44	1397	-4.88	1285
90	21.90	1431	-4.22	1354
100	22.06	1440	-4.02	1394
110	22.03	1425	-4.16	1407
120	22.01	1387	-4.36	1398
130	22.16	1329	-4.45	1372
140	22.44	1257	-4.48	1331
150	22.58	1178	-4.72	1284
160	22.24	1103	-5.51	1242
170	21.21	1046	-6.98	1210
180	19.52	1013	-8.91	1186

* REFER TO FIGURES 39, 41, 45, 46, AND 49 (RM 63TMP-2)

*Table 64. Points with $B=0.1859$ Gauss, $L=1.297$ Earth Radii, and $I=0.248$ Earth Radii

LONGITUDE DEGREES EAST	NORTHERN		SOUTHERN	
	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-170	17.50	1500	-10.77	1641
-160	15.49	1494	-12.75	1613
-150	13.54	1492	-14.67	1578
-140	11.67	1490	-16.54	1538
-130	9.87	1487	-18.35	1491
-120	8.11	1481	-20.17	1438
-110	6.32	1469	-22.07	1377
-100	4.41	1444	-24.17	1304
-90	2.36	1399	-26.42	1214
-80	0.39	1330	-28.60	1102
-70	-1.03	1245	-30.26	976
-60	-1.11	1170	-30.95	850
-50	0.99	1144	-30.13	750
-40	4.96	1168	-27.34	716
-30	9.32	1214	-22.88	763
-20	13.14	1266	-17.99	856
-10	16.20	1324	-13.73	960
0	18.47	1383	-10.39	1061
10	19.95	1441	-8.07	1151
20	20.63	1496	-6.90	1226
30	20.63	1550	-6.70	1289
40	20.27	1605	-6.98	1354
50	20.03	1667	-7.11	1438
60	20.23	1736	-6.70	1544
70	20.82	1803	-5.84	1655
80	21.46	1859	-4.91	1752
90	21.92	1895	-4.26	1823
100	22.12	1907	-4.00	1865
110	22.16	1895	-4.03	1882
120	22.18	1862	-4.16	1876
130	22.31	1810	-4.25	1852
140	22.48	1744	-4.36	1814
150	22.49	1672	-4.68	1769
160	22.07	1604	-5.50	1727
170	21.04	1550	-6.92	1693
180	19.44	1516	-8.77	1666

* REFER TO FIGURES 40, 42, 45, 46, AND 49 (RM 63TMP-2)

*Table 65. Points with B=0.5316 Gauss, L=1.712 Earth Radii, and I=2.188 Earth Radii

LONGITUDE DEGREES EAST	NORTHERN LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LONGITUDE DEGREES EAST	SOUTHERN LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-178	47.67	-329	-170	-37.75	14
-168	45.98	-330	-160	-39.84	-9
-158	43.80	-295	-150	-41.90	-33
-148	41.44	-239	-140	-43.97	-64
-138	39.12	-177	-130	-46.09	-104
-128	36.91	-120	-120	-48.34	-155
-118	34.81	-75	-110	-50.78	-220
-108	32.76	-45	-100	-53.35	-295
-98	30.75	-35	-90	-55.83	-378
-88	28.86	-46	-80	-57.92	-467
-78	27.39	-79	-70	-59.49	-560
-68	26.98	-133	-60	-60.43	-660
-58	28.36	-198	-50	-60.74	-770
-48	31.47	-266	-40	-60.38	-900
-38	35.02	-326	-30	-59.34	-1062
-28	38.65	-354	-20	-57.58	-1279
-18	41.59	-355	-10	-55.39	-1606
-8	43.68	-342	0	-54.98	-2164
2	45.12	-319	10	-38.53	-1570
12	45.97	-286	20	-34.70	-1318
22	46.25	-239	30	-33.61	-1312
32	46.11	-179	40	-34.09	-1419
42	45.86	-107	50	-34.26	-1154
52	45.70	-32	60	-33.08	-737
62	45.76	39	70	-31.55	-422
72	46.00	100	80	-30.12	-193
82	46.29	148	90	-29.14	-34
92	46.55	178	100	-28.72	69
102	46.78	186	110	-28.76	131
112	47.03	169	120	-29.01	162
122	47.42	126	130	-29.37	170
132	47.94	59	140	-29.86	160
142	48.53	-27	150	-30.65	135
152	48.98	-122	160	-31.92	103
162	49.11	-214	170	-33.65	69
172	48.71	-288	180	-35.66	39

• REFER TO FIGURES 43, 44, 47, 48, AND 50 (RM 63TMP-2)

*Table 66. Points with B=0.5051 Gauss, L=1.735 Earth Radii, and I=2.209 Earth Radii

NORTHERN			SOUTHERN		
LONGITUDE	LATITUDE	ALTITUDE	LONGITUDE	LATITUDE	ALTITUDE
DEGREES EAST	DEGREES NORTH	KILOMETERS	DEGREES EAST	DEGREES NORTH	KILOMETERS
-178	47.47	-217	-170	-37.65	117
-168	45.79	-219	-160	-39.74	94
-158	43.63	-186	-150	-41.81	69
-148	41.31	-133	-140	-43.89	37
-138	39.00	-74	-130	-46.02	-4
-128	36.80	-19	-120	-48.28	-56
-118	34.69	24	-110	-50.70	-120
-108	32.65	52	-100	-53.22	-196
-98	30.65	62	-90	-55.64	-281
-88	28.78	51	-80	-57.69	-371
-78	27.34	17	-70	-59.21	-465
-68	26.95	-36	-60	-60.12	-566
-58	28.31	-101	-50	-60.40	-679
-48	31.36	-166	-40	-60.01	-809
-38	34.94	-223	-30	-58.92	-970
-28	38.39	-251	-20	-57.09	-1184
-18	41.38	-251	-10	-54.71	-1501
-8	43.49	-238	0	-54.25	-2078
2	44.94	-215	10	-39.10	-1484
12	45.81	-181	20	-35.18	-1231
22	46.13	-135	30	-34.01	-1208
32	46.05	-75	40	-34.32	-1247
42	45.83	-4	50	-34.19	-981
52	45.69	70	60	-33.02	-611
62	45.76	139	70	-31.52	-312
72	46.00	200	80	-30.11	-88
82	46.29	247	90	-29.13	68
92	46.56	276	100	-28.69	170
102	46.79	284	110	-28.70	232
112	47.05	267	120	-28.94	263
122	47.42	225	130	-29.29	272
132	47.92	160	140	-29.78	262
142	48.47	76	150	-30.57	238
152	48.88	-17	160	-31.84	206
162	48.96	-106	170	-33.56	173
172	48.53	-177	180	-35.56	143

* REFER TO FIGURES 43, 44, 47, 48, AND 50 (IRM 63TMP-2)

*Table 67. Points with B=0.4802 Gauss, L=1.758 Earth
Radii, and I=2.230 Earth Radii

LONGITUDE DEGREES EAST	NORTHERN LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LONGITUDE DEGREES EAST	SOUTHERN LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-178	47.28	-106	-170	-37.55	221
-168	45.62	-108	-160	-39.64	197
-158	43.49	-78	-150	-41.73	170
-148	41.18	-27	-140	-43.82	138
-138	38.89	29	-130	-45.96	96
-128	36.69	82	-120	-48.21	44
-118	34.58	123	-110	-50.61	-21
-108	32.54	150	-100	-53.10	-98
-98	30.54	159	-90	-55.46	-183
-88	28.69	147	-80	-57.46	-274
-78	27.29	113	-70	-58.94	-369
-68	26.92	60	-60	-59.82	-472
-58	28.26	-3	-50	-60.07	-585
-48	31.25	-67	-40	-59.65	-716
-38	34.83	-120	-30	-58.51	-876
-28	38.14	-149	-20	-56.60	-1085
-18	41.17	-148	-10	-54.01	-1386
-8	43.30	-135	0	-90.00	0
2	44.77	-111	10	-39.57	-1377
12	45.66	-77	20	-35.62	-1136
22	46.02	-30	30	-34.37	-1096
32	45.98	29	40	-34.44	-1078
42	45.79	99	50	-34.12	-824
52	45.68	171	60	-32.96	-486
62	45.76	240	70	-31.48	-202
72	46.00	300	80	-30.09	16
82	46.29	346	90	-29.11	170
92	46.56	375	100	-28.65	272
102	46.80	382	110	-28.64	333
112	47.06	366	120	-28.86	365
122	47.42	325	130	-29.20	373
132	47.90	260	140	-29.70	364
142	48.41	179	150	-30.50	340
152	48.78	89	160	-31.76	309
162	48.82	2	170	-33.47	276
172	48.35	-67	180	-35.47	246

• REFER TO FIGURES 43, 44, 47, 48, AND 50 (RM 63TMP-2)

*Table 68. Points with B=0.4571 Gauss, L=1.782 Earth Radii, and I=2.251 Earth Radii

NORTHERN			SOUTHERN		
LONGITUDE	LATITUDE	ALTITUDE	LONGITUDE	LATITUDE	ALTITUDE
DEGREES EAST	DEGREES NORTH	KILOMETERS	DEGREES EAST	DEGREES NORTH	KILOMETERS
-178	47.11	5	-170	-37.46	324
-168	45.45	2	-160	-39.56	299
-158	43.34	30	-150	-41.65	272
-148	41.05	78	-140	-43.74	239
-138	38.78	132	-130	-45.89	197
-128	36.58	182	-120	-48.14	143
-118	34.47	222	-110	-50.53	78
-108	32.43	248	-100	-52.98	1
-98	30.44	256	-90	-55.30	-84
-88	28.62	244	-80	-57.25	-176
-78	27.24	210	-70	-58.69	-273
-68	26.90	157	-60	-59.53	-376
-58	28.22	95	-50	-59.75	-490
-48	31.15	33	-40	-59.30	-621
-38	34.72	-17	-30	-58.11	-779
-28	37.90	-48	-20	-56.12	-981
-18	40.98	-45	-10	-53.31	-1261
-8	43.12	-31	0	-90.00	0
2	44.60	-7	10	-39.92	-1253
12	45.51	27	20	-36.00	-1030
22	45.90	74	30	-34.65	-974
32	45.91	133	40	-34.53	-918
42	45.75	202	50	-34.06	-676
52	45.66	273	60	-32.90	-364
62	45.75	341	70	-31.44	-92
72	46.00	400	80	-30.07	120
82	46.30	445	90	-29.09	272
92	46.57	474	100	-28.62	373
102	46.81	481	110	-28.59	434
112	47.07	465	120	-28.79	466
122	47.43	424	130	-29.13	475
132	47.88	361	140	-29.62	465
142	48.35	282	150	-30.43	443
152	48.68	194	160	-31.69	412
162	48.68	110	170	-33.39	380
172	48.19	43	180	-35.37	350

* REFER TO FIGURES 43, 44, 47, 48, AND 50 (RM 63TMP-2)

*Table 69. Points with B=0.4150 Gauss, L=1.828 Earth Radii, and I=2.293 Earth Radii

NORTHERN			SOUTHERN		
LONGITUDE	LATITUDE	ALTITUDE	LONGITUDE	LATITUDE	ALTITUDE
DEGREES EAST	DEGREES NORTH	KILOMETERS	DEGREES EAST	DEGREES NORTH	KILOMETERS
-178	46.78	226	-170	-37.28	530
-168	45.14	222	-160	-39.39	504
-158	43.08	246	-150	-41.49	475
-148	40.83	289	-140	-43.61	440
-138	38.57	338	-130	-45.77	397
-128	36.37	384	-120	-48.02	343
-118	34.26	421	-110	-50.37	277
-108	32.22	444	-100	-52.75	199
-98	30.26	450	-90	-54.98	113
-88	28.47	437	-80	-56.85	20
-78	27.15	403	-70	-58.21	-78
-68	26.85	351	-60	-58.99	-183
-58	28.13	290	-50	-59.14	-297
-48	30.95	232	-40	-58.62	-426
-38	34.44	186	-30	-57.36	-579
-28	37.81	162	-20	-55.22	-765
-18	40.62	161	-10	-52.04	-994
-8	42.76	175	0	-47.13	-1198
2	44.28	200	10	-40.31	-976
12	45.23	235	20	-36.58	-800
22	45.68	282	30	-35.07	-720
32	45.77	340	40	-34.58	-620
42	45.67	407	50	-33.94	-400
52	45.63	476	60	-32.78	-125
62	45.74	543	70	-31.36	126
72	46.00	600	80	-30.02	328
82	46.30	644	90	-29.05	476
92	46.58	671	100	-28.56	576
102	46.83	678	110	-28.48	637
112	47.09	662	120	-28.65	669
122	47.43	623	130	-28.98	678
132	47.84	563	140	-29.47	669
142	48.25	488	150	-30.29	647
152	48.50	405	160	-31.54	617
162	48.43	325	170	-33.23	586
172	47.88	262	180	-35.20	556

* REFER TO FIGURES 43, 44, 47, 48, AND 50 (RM 63TMP-2)

*Table 70. Points with B=0.3780 Gauss, L=1.875 Earth Radii, and I=2.336 Earth Radii

LONGITUDE DEGREES EAST	NORTHERN LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS	LONGITUDE DEGREES EAST	SOUTHERN LATITUDE DEGREES NORTH	ALTITUDE KILOMETERS
-178	46.49	445	-170	-37.11	735
-168	44.86	440	-160	-39.23	708
-158	42.84	461	-150	-41.35	678
-148	40.63	499	-140	-43.49	642
-138	38.38	544	-130	-45.66	598
-128	36.19	587	-120	-47.91	542
-118	34.07	620	-110	-50.23	476
-108	32.04	641	-100	-52.55	398
-98	30.09	646	-90	-54.69	312
-88	28.34	631	-80	-56.48	218
-78	27.07	596	-70	-57.77	119
-68	26.80	545	-60	-58.49	15
-58	28.05	486	-50	-58.58	-99
-48	30.77	430	-40	-58.00	-226
-38	34.18	388	-30	-56.66	-371
-28	37.50	367	-20	-54.41	-539
-18	40.28	366	-10	-51.02	-722
-8	42.43	380	0	-46.03	-822
2	43.98	406	10	-40.51	-696
12	44.97	442	20	-36.98	-556
22	45.47	488	30	-35.33	-462
32	45.61	546	40	-34.61	-344
42	45.59	611	50	-33.84	-140
52	45.59	679	60	-32.67	109
62	45.73	744	70	-31.28	343
72	46.00	800	80	-29.97	536
82	46.31	843	90	-29.00	680
92	46.60	870	100	-28.49	778
102	46.85	876	110	-28.38	839
112	47.11	861	120	-28.52	871
122	47.44	823	130	-28.84	881
132	47.81	766	140	-29.34	872
142	48.16	694	150	-30.16	851
152	48.34	615	160	-31.42	822
162	48.20	540	170	-33.09	791
172	47.61	480	180	-35.04	762

* REFER TO FIGURES 43, 44, 47, 48, AND 50 (RM 63TMP-2)

*Table 71. Points with $B=0.3453$ Gauss, $L=1.922$ Earth Radii, and $I=2.380$ Earth Radii

NORTHERN			SOUTHERN		
LONGITUDE	LATITUDE	ALTITUDE	LONGITUDE	LATITUDE	ALTITUDE
DEGREES EAST	DEGREES NORTH	KILOMETERS	DEGREES EAST	DEGREES NORTH	KILOMETERS
-178	46.23	664	-170	-36.97	940
-168	44.61	657	-160	-39.09	912
-158	42.62	675	-150	-41.23	881
-148	40.43	709	-140	-43.38	844
-138	38.20	750	-130	-45.56	798
-128	36.01	789	-120	-47.80	742
-118	33.90	820	-110	-50.10	676
-108	31.86	838	-100	-52.36	598
-98	29.93	841	-90	-54.43	511
-88	28.21	825	-80	-56.14	418
-78	27.00	790	-70	-57.36	319
-68	26.76	739	-60	-58.02	214
-58	27.97	682	-50	-58.06	102
-48	30.60	629	-40	-57.42	-21
-38	33.93	589	-30	-56.02	-159
-28	37.19	570	-20	-53.69	-310
-18	39.95	570	-10	-50.22	-456
-8	42.12	585	0	-45.48	-515
2	43.69	612	10	-40.60	-426
12	44.72	648	20	-37.26	-308
22	45.27	695	30	-35.51	-208
32	45.47	751	40	-34.60	-83
42	45.51	815	50	-33.73	109
52	45.56	882	60	-32.56	338
62	45.72	945	70	-31.20	559
72	46.00	1000	80	-29.91	744
82	46.31	1042	90	-28.95	884
92	46.61	1068	100	-28.43	981
102	46.87	1074	110	-28.29	1041
112	47.13	1059	120	-28.41	1074
122	47.44	1023	130	-28.71	1083
132	47.78	968	140	-29.22	1076
142	48.07	900	150	-30.05	1055
152	48.19	825	160	-31.30	1027
162	48.00	754	170	-32.95	997
172	47.37	697	180	-34.89	968

* REFER TO FIGURES 43, 44, 47, 48, AND 50 (RM 63TMP-2)

*Table 72. Points with B=0.2787 Gauss, L=2.039 Earth Radii, and I=2.491 Earth Radii

NORTHERN			SOUTHERN		
LONGITUDE	LATITUDE	ALTITUDE	LONGITUDE	LATITUDE	ALTITUDE
DEGREES EAST	DEGREES NORTH	KILOMETERS	DEGREES EAST	DEGREES NORTH	KILOMETERS
-178	45.68	1204	-170	-36.64	1450
-168	44.08	1195	-160	-38.78	1420
-158	42.14	1206	-150	-40.95	1387
-148	40.00	1232	-140	-43.13	1347
-138	37.79	1264	-130	-45.33	1300
-128	35.61	1295	-120	-47.56	1243
-118	33.50	1320	-110	-49.79	1175
-108	31.48	1333	-100	-51.93	1098
-98	29.59	1331	-90	-53.85	1012
-88	27.95	1312	-80	-55.40	919
-78	26.83	1276	-70	-56.48	822
-68	26.66	1227	-60	-57.00	720
-58	27.80	1173	-50	-56.93	613
-48	30.23	1125	-40	-56.17	500
-38	33.35	1091	-30	-54.66	383
-28	36.48	1076	-20	-52.26	267
-18	39.20	1078	-10	-48.87	177
-8	41.39	1095	0	-44.73	154
2	43.01	1122	10	-40.68	210
12	44.14	1160	20	-37.63	301
22	44.80	1207	30	-35.75	402
32	45.14	1262	40	-34.57	531
42	45.30	1324	50	-33.50	700
52	45.46	1387	60	-32.31	897
62	45.69	1448	70	-31.00	1092
72	46.00	1500	80	-29.77	1261
82	46.33	1540	90	-28.83	1393
92	46.64	1564	100	-28.27	1487
102	46.92	1571	110	-28.07	1547
112	47.18	1558	120	-28.15	1579
122	47.45	1525	130	-28.43	1590
132	47.70	1476	140	-28.94	1583
142	47.88	1415	150	-29.78	1564
152	47.87	1348	160	-31.03	1537
162	47.56	1286	170	-32.66	1508
172	46.85	1235	180	-34.58	1479

• REFER TO FIGURES 43, 44, 47, 48, AND 50 (RM 63TMP-2)

*Table 73. Geomagnetic Equator

EAST LONGITUDE (DEG)	LATITUDE (DEG)	ALTITUDE 100 KILOMETERS INDUCTION				LATITUDE (DEG)	ALTITUDE 1500 KILOMETERS INDUCTION			
		R	RR	BP	BT		R	RR	BP	BT
			(GAUSS)					(GAUSS)		
-180	+4.785	.3236	+.027	+.317	-.059	+5.358	.1783	+.009	+.175	-.031
-170	+2.577	.3223	+.025	+.316	-.059	+3.350	.1769	+.009	+.174	-.033
-160	+.730	.3196	+.021	+.314	-.056	+1.363	.1756	+.007	+.172	-.033
-150	-.900	.3155	+.016	+.311	-.053	-.548	.1741	+.006	+.171	-.032
-140	-2.473	.3107	+.011	+.306	-.050	-2.398	.1723	+.003	+.169	-.031
-130	-3.967	.3059	+.004	+.302	-.047	-4.193	.1704	+.001	+.168	-.030
-120	-5.341	.3017	-.003	+.298	-.045	-5.964	.1683	-.002	+.166	-.029
-110	-6.787	.2980	-.011	+.294	-.045	-7.805	.1658	-.004	+.163	-.028
-100	-8.680	.2934	-.017	+.289	-.048	-9.829	.1626	-.006	+.160	-.026
-90	-11.243	.2850	-.021	+.280	-.046	-12.026	.1584	-.008	+.157	-.022
-80	-14.207	.2718	-.025	+.268	-.035	-14.122	.1531	-.009	+.152	-.014
-70	-16.765	.2561	-.029	+.254	-.012	-15.613	.1475	-.011	+.147	-.003
-60	-17.715	.2435	-.035	+.240	+.019	-15.891	.1427	-.013	+.142	+.010
-50	-15.689	.2403	-.038	+.232	+.051	-14.459	.1402	-.014	+.137	+.024
-40	-10.506	.2484	-.037	+.234	+.075	-11.247	.1403	-.015	+.135	+.035
-30	-4.533	.2608	-.032	+.246	+.085	-6.963	.1428	-.015	+.136	+.041
-20	+.340	.2726	-.028	+.257	+.082	-2.673	.1467	-.015	+.140	+.041
-10	+4.011	.2847	-.025	+.274	+.074	+.998	.1512	-.014	+.146	+.039
0	+6.841	.2975	-.022	+.290	+.062	+3.861	.1560	-.013	+.152	+.033
+10	+8.780	.3097	-.021	+.306	+.045	+5.823	.1607	-.013	+.158	+.026
+20	+9.503	.3197	-.022	+.318	+.023	+6.800	.1651	-.013	+.164	+.018
+30	+8.898	.3271	-.024	+.326	+.005	+6.889	.1691	-.013	+.168	+.011
+40	+7.437	.3327	-.027	+.332	-.003	+6.491	.1732	-.013	+.173	+.008
+50	+6.216	.3397	-.028	+.339	+.004	+6.221	.1782	-.012	+.178	+.009
+60	+6.213	.3518	-.024	+.350	+.018	+6.512	.1842	-.010	+.184	+.011
+70	+7.309	.3670	-.019	+.366	+.027	+7.305	.1907	-.008	+.190	+.013
+80	+8.575	.3803	-.015	+.379	+.023	+8.193	.1964	-.006	+.196	+.011
+90	+9.232	.3878	-.012	+.387	+.010	+8.789	.2003	-.005	+.200	+.007
+100	+9.071	.3888	-.009	+.389	-.004	+8.969	.2021	-.003	+.202	+.002
+110	+8.429	.3843	-.004	+.384	-.012	+8.874	.2017	-.001	+.202	-.001
+120	+7.923	.3760	+.002	+.376	-.011	+8.774	.1995	+.001	+.199	-.003
+130	+8.007	.3653	+.007	+.365	-.007	+8.844	.1960	+.003	+.196	-.005
+140	+8.596	.3528	+.013	+.352	-.010	+9.019	.1916	+.005	+.191	-.008
+150	+9.069	.3402	+.019	+.339	-.021	+8.996	.1871	+.007	+.186	-.013
+160	+8.665	.3303	+.024	+.327	-.038	+8.426	.1831	+.008	+.182	-.020
+170	+7.070	.3253	+.027	+.320	-.052	+7.160	.1802	+.009	+.178	-.027
+180	+4.785	.3236	+.027	+.317	-.059	+5.358	.1783	+.009	+.175	-.031

* REFER TO FIGURES 51 (RM 63TMP-2)